Public Disclosure Authorized

Public Disclosure Authorized

Report No. 355a-BR

Economic Position and Prospects of Brazil

(In Three Volumes)

Volume I: The Main Report

June 20, 1974

Latin America and the Caribbean Regional Office

Not for Public Use

Document of the International Bank for Reconstruction and Development
International Development Association

This report was prepared for official use only by the Bank Group. It may not be published, quoted or cited without Bank Group authorization. The Bank Group does not accept responsibility for the accuracy or completeness of the report.

CURRENCY EQUIVALENT

Currency Unit: Cruzeiro

Exchange Rates Effective June 5, 1974

Selling Rate:	US$1.00	=	Cr$6.680
	US$1 million	=	Cr$6,680,000
	Cr$1 million	=	US$149,701
Buying Rate:	US$1.00	=	Cr$6.640

Average Exchange Rates (Selling)

		1972	1973
US$1.00	=	Cr$5,935	Cr$6,126
US$1 million	=	Cr$5,935,000	Cr$6,126,000
Cr$1 million	=	US$168,492	US$163,239

ADDENDUM TO REPORT NO. 355a-BR, "Economic Position and Prospects of Brazil"

In "CURRENCY EQUIVALENT" of all three volumes of this report, Average Exchange Rate (Selling) should read (for years 1972 and 1973) "Cr$5.935" and "Cr$6.126" instead of "Cr$5,935" and "Cr$6,126".

This report is based on the findings of a mission to Brazil in August-September 1973, composed of:

David G. Greene (Chief of Mission)
Roberto Echeverria (Economist)
Surinder K. Malik (Economist)

TABLE OF CONTENTS

COUNTRY DATA - BRAZIL

AREA
8,512,000 km² 2/

POPULATION
93.2 million (mid-1970)
Rate of Growth: 2.9% (from 1960 to 1970)

DENSITY
11.2 per km² 2/
33.5 per km² 2/ of arable land

POPULATION CHARACTERISTICS, 1970

Crude Birth Rate (per 1,000)	37
Crude Death Rate (per 1,000)	8
Infant Mortality (per 1,000 live births)	110

HEALTH, 1970

Population per physician	2,120
Population per hospital bed	280

INCOME DISTRIBUTION, 1970

% of national income, highest quintile	62.2
lowest quintile	3.2

DISTRIBUTION OF LAND OWNERSHIP, 1970

% owned by top 10% of owners	45.0
% owned by smallest 10% of owners	1.5

ACCESS TO PIPED WATER, 1970

% of population - urban	55.0
- rural	2.5

ACCESS TO ELECTRICITY, 1970

% of population - urban	..
- rural	..

NUTRITION, 1968

Calorie intake as % of requirements	102.0
Per capita protein intake	63.0

EDUCATION, 1970

Adult literacy rate %	68.0
Primary school enrollment %	96.3

GNP PER CAPITA in 1973 1/ : US$630

GROSS NATIONAL PRODUCT IN 1973

	US $ Mln.	%
GNP at Market Prices	65,172	100.0
Gross Domestic Investment	13,188	20.2
Gross National Saving	11,880	18.2
Current Account Balance	-1,307	-2.0
Exports of Goods, NFS	6,577	10.1
Imports of Goods, NFS	7,258	11.1

ANNUAL RATE OF GROWTH (%, constant prices)

	1960-65	1965-70	1972	1973
GNP at Market Prices	4.6	7.2	10.4	11.4
Gross Domestic Investment	4.5	7.1	20.5	19.1
Gross National Saving	9.8	3.4	22.9	27.2
Current Account Balance	.	.	.	.
Exports of Goods, NFS	2.3	9.1	28.1	29.1
Imports of Goods, NFS	-8.1	17.9	23.0	17.0

OUTPUT, LABOR FORCE AND PRODUCTIVITY IN 1970

	Value Added (Factor Cost)		Labor Force 2/		V. A. Per Worker	
	US $ Mln.	%	Mln.	%	US $	%
Agriculture	5,257	17.4	13.1	44.2	401	39.2
Industry	8,633	28.6	5.3	17.8	1,629	159.1
Services	16,314	54.0	)		1,470	143.6
Unallocated	.	.	) 11.1	38.0	.	.
Total	30,204	100.0	29.5	100.0	1,024	100.0

GOVERNMENT FINANCE

	General Government 3/			Central Government		
	(1968 Cr$ Million)	% of GDP		(1968 Cr$ Million)	% of GDP	
	1973	1973	1971-73	1973	1973	1971-73
Current Receipts	36,405	22.5	21.7	18,759	11.6	10.9
Current Expenditure	24,041	14.8	14.9	11,579	7.2	7.1
Current Surplus	12,364	7.6	6.8	7,180	4.4	3.8
Capital Expenditures	13,308	8.2	7.6	7,380	4.6	4.0
External Assistance (Gross)	190	0.1	0.1	..	..	..

1/ The Per Capita GNP estimate is at 1973 market prices, calculated by the same conversion technique as the 1972 World Atlas. All other conversions to dollars in this table are at the average exchange rate prevailing during the period covered.
2/ Total labor force; unemployed are allocated to sector of their normal occupation. "Unallocated" consists mainly of unemployed workers seeking their first job.
3/ Central, State, and Municipal Governments.

.. not available
. not applicable

COUNTRY DATA - BRAZIL

MONEY, CREDIT and PRICES	Dec. 1965	Dec. 1969	Dec. 1970	Dec. 1971	Dec. 1972	March 1972	March 1973
		(Million Cr$ outstanding end period)					
Money and Quasi Money	8,058	30,750	42,178	57,730	86,625	59,935	89,109
Bank Credit to Public Sector	1,676	8,731	7,862	4,155	-6,038	1,496	-11,744
Bank Credit to Private Sector	5,187	25,944	35,072	51,620	74,535	54,431	79,225
		(Percentages or Index Numbers)					
Money and Quasi Money as % of GDP	21.9	23.1	24.2	24.7	28.6	..	..
General Price Index (1963 = 100)	299	793	950	1,145	1,339	1,289	1,479
Annual percentage changes in:							
General Price Index	56.8	20.8	19.8	20.4	17.0	15.1	14.7
Bank credit to Public Sector	10.4	-6.6	-10.0	-47.2	.	..	..
Bank credit to Private Sector	60.6	42.5	35.2	47.2	44.4	..	..

BALANCE OF PAYMENTS

	1971	1972	1973
	(Millions US $)		
Exports of Goods, NFS	3,175	4,272	6,577
Imports of Goods, NFS	4,028	5,205	7,258
Resource Gap (deficit = -)	-853	-933	-681
Interest Payments (net)	-302	-359	-434
Workers' Remittances	-	-	-
Other Factor Payments (net)	-166	-202	-220
Net Transfers	14	5	28
Balance on Current Account	-1,307	-1,489	-1,307
Direct Foreign Investment	168	318	941
Net MLT Borrowing	394	574	825
Disbursements	835	1,099	1,461
Amortization	-441	-525	-636
Subtotal	562	892	1,766
Capital Grants	-	-	-
Financial Credits (net)	801	2,536	1,850
Other items n.e.i.	504	626	-172
Increase in Reserves (+)	560	2,565	2,137
Gross Reserves (end year)	2,039	4,659	..
Net Reserves (end year)	2,033	4,598	6,735

MERCHANDISE EXPORTS (AVERAGE 1971-73)

	US $ Mln	%
Coffee Beans	1,001	22.9
Other Agriculture	1,635	37.5
(Sugar, Soybean, Cotton)	(954)	(21.8)
Minerals	324	7.4
Semi-processed and Manufactured	1,328	30.4
All other commodities	76	1.7
Total	4,364	100.0

EXTERNAL DEBT, DECEMBER 31, 1973

	US $ Mln
Medium and Long-Term Borrowing	4,818
Financial Credits	7,782
Total Outstanding and Disbursed	12,600

DEBT SERVICE RATIO for 1973 1/

	%
Amortization of MLT Borrowing	9.7
Net Interest on MLT and Financial Credits	6.6
Total	16.3

RATE OF EXCHANGE

December 31, 1972
US$1.00 = Cr$6.215
Cr$1.00 = US$0.1609

December 31, 1973
US$1.00 = Cr$6.220
Cr$1.00 = US$0.1608

Since January 31, 1974
US$1.00 = Cr$6.340
Cr$1.00 = US$0.1577

IBRD/IDA LENDING, DECEMBER 31, 1973 (Million US$):

	IBRD	IDA
Outstanding & Disbursed	701	.
Undisbursed	810	.
Outstanding incl. Undisbursed	1,511	.

1/ Ratio of Debt Service to Exports of Goods and Non-Factor Services.

.. not available

. not applicable

Date: June 11, 1974
Department: Latin America and Caribbean

SUMMARY AND CONCLUSIONS

1. The 11.4% increase in GDP registered by Brazil in 1973 marks the third consecutive year in which the growth of the economy exceeded 10% and the sixth in which it was at least 9%. The average rate of growth of 10.2% over 1967-73 has resulted in a 50% increase in per capita product and during this period manufacturing output has doubled and merchandise exports have grown from less than US$1.7 billion to over US$6 billion. Largely as a result of careful economic management, a remarkable broadening and deepening of the country's productive base, of its infrastructure and of its external sector have been achieved. Brazil, with its more than 100 million people now has a larger national economy than any other Western Hemisphere country, with the exception of Canada and the U.S. Yet, it is still a poor country with a per capita income in the US$600 range, a very unequal income distribution and extensive absolute poverty.

2. The resurgence of the external sector over the past six years was remarkable. Export volume has grown by 18.5% per year reaching 10.6% of GDP in 1973 compared with only 6.8% six years earlier. Import requirements have increased even more rapidly, 20% per year, resulting in increase in the resource gap from 0.1% of GDP in 1967 to 1.1% in 1973. This reflects the fact that despite a very high marginal saving rate, 0.288, the rate of increase in investment required by the rapid growth of GDP has outstripped the generation of saving. While the resource gap was fairly modest in 1973, it has been as high as 2.1% in 1971. The decrease since then is a result of a rapid increase in saving, probably reflecting favorable evolution of export prices and may not, therefore, represent a trend but rather a lag between increased incomes due to improved terms of trade and increases in consumption.

3. While the expansion of the Brazilian economy has been spearheaded by accelerating industrial production, with annual increases averaging 12.9% and reaching 15% in 1973, the agricultural sector has also performed well in supplying domestic demand for food and fibers while producing a rising volume of export commodities, with output growing by 5.5% per year despite adverse climatic conditions which limited growth to 4% in 1972 and 5% in 1973. The modest increase in physical output in these years was, however, accompanied by a substantial improvement in sectoral terms of trade so that rural incomes increased rapidly. As a result of the prolonged period of rapid growth of output and incomes, both commodity producing sectors are beginning to show signs of structural change and also to exhibit some symptoms of strain. Industry is being transformed from a sector with excess capacity and a relatively marginal impact on employment into one in which capacity limitations are becoming a constraint and where labor absorption is accelerating. Industrial employment will probably show an 8% increase in 1973, as many firms have begun to operate more than one shift. Supply bottlenecks have, however, begun to appear in the petrochemicals, paper, steel and metals industries in 1973. The Government has responded to shortfalls in domestic production by liberalizing imports while attempting to accelerate plans for expansion of productive capacity in key industries. Increases in foreign and domestic demand for and prices of major agricultural commodities

have resulted in rapid expansion of land area devoted to production of crops such as soybeans, sugar and cotton. This is generating longer term shifts in the structure and location of production of the sector. Pressure on land resources in the south is encouraging an accelerated extension of the agricultural frontier into the Amazon and Center-West. The changes in the balance between production for export and for the domestic market, coupled with increases in the world prices of export crops, have led to upward pressure on commodity prices. The Government is attempting to encourage expansion of production for the domestic market by increasing support prices and expanding credit. While in the case of most commodities the supply problem seems to be short term, in the case of beef rapidly increasing domestic demand raises questions about long-term export prospects. The tight domestic supply situation in agriculture and industry combined with rising world prices of petroleum and petrochemicals will make further reduction of inflation in 1974 difficult, if not impossible, to achieve. Even approximating the 12% target for consumer price increase in 1973 required extraordinary measures such as reduction of taxes and import duties, restriction of exports and, in some cases, subsidization of imports, and there is some evidence of suppressed inflation. The likelihood is that there will be an acceleration of inflation in 1974, which could in part reflect a relaxation of price controls and restoration of prices to levels more closely approximating market equilibrium.

4. The historical tendencies toward the urbanization of Brazil and the rapid southward and westward movement of population have undoubtedly been strengthened by recent rapid economic expansion. Between 1960 and 1970, the rural population increased by 2.6 million, or 0.7% per year, while the urban population grew by 21 million, or 5.2% per year. Rapid urbanization, while contributing to a declining birth rate, is placing a heavy strain on the social and economic infrastructure of metropolitan areas and of quickly growing smaller cities and is resulting in an increasing fiscal burden on state and local governments. The migration of population to the agricultural frontier of the Amazon and Center-West has resulted in a mixed pattern of agricultural development combining spontaneous settlement, highly organized colonization projects and large commercial establishments. Unfortunately, much of the settlement has been an extension of Northeast subsistence farming patterns by migrants following the opening of new road systems. The Government has yet to develop a land settlement strategy which would minimize the extent to which subsistence agriculture patterns prevalent in the Northeast are reproduced in new settlement areas.

5. There is little doubt that Brazil experienced a substantial reconcentration of income over 1960-70 or that its income distribution is now highly skewed. Although all income groups experienced increases in per capita income during the intercensal period, the share received by the highest decile increased while that of every other decile declined. By 1970, the top 25% of income recipients commanded two-thirds of total income, while the remaining 75% received only one-third and had a mean income level one-sixth as great. There are not sufficiently disaggregated data available to permit precise judgments about the evolution of income distribution since 1967. Available evidence suggests, however, that there has been an increasing

absorption of labor into the modern sector of the economy, that real wages have been rising and that as a result, income shares of the middle deciles, which declined most sharply over 1960-70, may have recuperated. While improved agricultural incomes resulting from favorable sectoral terms of trade would tend to improve overall income distribution, much of the improvement has resulted from increases in prices of exports which are produced on relatively large establishments. At the other extreme, subsistence farmers would tend to benefit little from price rises. There is, however, evidence of substantial improvement in agricultural wages, especially since 1970. Urban workers have benefited from a liberalization of wage adjustment formulas since 1968 and increasing industrial employment has arrested the tendency toward a declining wage share of output in that sector. In addition, there are now reports of tight urban and rural labor markets in the south, even for relatively unskilled workers. Nevertheless, there is little reason to believe that the real income of the illiterate or undereducated subsistence farmers and urban casual laborers who make up the bottom two or three deciles have increased and their share of total income has probably continued to decline.

6. The Brazilian Government is convinced that the poverty and dualism that afflict the country can be ameliorated only if high rates of growth are sustained, permitting absorption of the economically marginal population into the modern sector. Within a policy context designed to promote rapid growth, the Government has initiated a significant number of regional and social development programs whose stated goals are alleviating poverty, facilitating access to more gainful employment and, to a lesser extent, redistributing income. The regional development programs, including those for the Northeast (PROTERRA), the Amazon (PIN), and Center-West (PRODOESTE) are in an early stage and have, thus far, been heavily oriented toward expansion and improvement of infrastructure, especially highways, and provision of credit to commercial agriculture and agro-industry. Colonization and land settlement policies are not yet well developed, as the opening of new agricultural lands in Brazil has traditionally been carried out without planned supporting infrastructure or officially organized settlement plans. The Government has been rethinking its settlement policy. It will probably allow the Center West to open with minimal official direction. The settlement policy for the Amazon awaits redefinition as organized settlement schemes have not been particularly successful. While there is a commitment to provide for poorer farmers who are spontaneously moving into these regions and the Government is attempting to develop settlement models, few believe that this will be the dominant form of settlement. The goals for land reform in the Northeast under PROTERRA are ambitious, calling for distribution of 250,000 hectares over 1972-74. However, because of fragmentation of administrative responsibility, lack of qualified technical manpower and insufficient research and extension activity, the program has virtually come to a halt. While research, extension, rural education, and health have not been ignored, regional development efforts seem strongly unbalanced, with a disproportionate emphasis on infrastructure. This unbalance reflects, on one hand, the Government's concern about regional disparities and its willingness to devote substantial amounts of resources to their solution and, on the other, the limitations on technical and administrative capacity for carrying out non-infrastructure components of programs.

7. There have been several important programs designed to broaden distribution of the benefits of economic growth introduced during the last few years, particularly in education, housing and sanitary services. Rapid progress is being made in attaining the education goals of the First National Development Plan. Public expenditure on education should approach 4.5% of GDP in 1974, compared with 3.4% in 1972. The targeted 80% enrollment rate for the 5-14 year age group by 1974 will probably be attained and the national literacy campaign has already trained 3.5 million people in its first two years. Two significant new programs have been devised for provision of housing and sanitary services to lower income groups. Both are being administered by the National Housing Bank (BNH) and jointly financed by BNH and state governments. The housing program, PLANHAP, has as its goal construction of two million units by 1980 for families with incomes between one and three minimum wages. The water and sewerage program, PLANASA, has as its target increasing the coverage of water supply to 80% of residences and sewerage to 50%. Both of these programs are structured so that programs in richer states will help finance those in poorer states and so that higher income beneficiaries will be charged progressively higher rates, supporting provision of services to those of more modest means. While neither of these programs will reach the very poorest people, both will provide for a significant increase in the well-being of a relatively modest class of society. Preliminary thought is being given to a highly subsidized sites and services program which would directly benefit lowest income groups.

8. There are measures which the Government could take, within its rapid growth policy framework, to broaden distribution of the benefits of growth. The rate of employment generation could be increased, at least at the margin, by replacement of some payroll taxes with more progressive levies on consumption, restructuring of industrial fiscal incentives to give some weight to employment objectives, and limiting use of interest rate subsidies to encourage agricultural production. Providing a better balance for rural development efforts through greater emphasis on rural education, health, research and extension will require upgrading and expanding training of technicians for carrying out such programs and adopting a public sector remuneration system which will encourage entry into public service and permit retention in a career service. In this sense, the real trade-off between distributive and growth objectives may involve the attraction of scarce technical and managerial manpower away from the private sector into public sector programs.

9. After a period in Brazil's development where the primary emphasis has been on industrialization, agriculture is now becoming an increasingly important element in the Government's overall development strategy. With industrial capacity currently almost fully utilized, it would be easier to sustain high rates of overall economic growth if agricultural growth rates of 6 or 7% per year could be achieved. The relative abundance of productive factors (land and labor) in the rural sector should permit expansion of GDP with a lower investment rate than would be possible with heavier reliance in industry. Moreover, the extent to which agricultural production meets the increases in domestic demand is crucial for the achievement of the Government's price stabilization objectives. In addition, agriculture is and will continue for some time to be a key generator of foreign exchange.

Finally, with about half of the population engaged in agricultural activities, a more balanced and equitable development process implies increasing agricultural production and productivity.

10. Brazil has the potential for sustaining comparatively high long-term growth rates of agricultural production. It is one of the few countries in the world that still has available abundant land on which continued expansion of output can be based, even without significant improvements in agricultural technology. The Government has allocated substantial public resources to programs to incorporate new areas to agricultural production. The goal of these programs is to expand agricultural area by 4 to 5% per year, and to encourage settlement to bring these areas into production as quickly as possible. In addition, the Government is promoting increases in productivity through a modernization of agricultural research and an increase in domestic production of improved seeds, the provision of agricultural transport and marketing infrastructure, and a substantial expansion in the supply of credit (and complementary technical assistance) at subsidized interest rates for the purchase of modern agricultural inputs. It is also using economic incentives to stimulate agricultural production, such as minimum prices, fiscal incentives and subsidized interest rates for financing agricultural inputs. These actions are undoubtedly going to have an impact, albeit gradual, on agricultural productivity, and the Government target of increasing overall productivity in agriculture by 2% per year in the long run seems feasible.

11. While Government policies and programs are producing considerable progress both in expanding land under cultivation and increasing productivity, improving the regional distribution of growth and the distribution of income in the sector is going much more slowly. Some Government programs -- particularly credit, colonization and land reform -- have components which could improve the productivity of the poor farmers; however, these have not been given sufficient priority for Government action and their impact to date has been modest, both in terms of coverage and ultimate beneficiaries. In spite of a substantial increase in the overall availability of agricultural credit, very little of the increase seems to have gone to small farmers. It is not clear if this is due to lack of incentives for small farmers to use credit (unfamiliarity with bank procedures, insufficient number of bank branches in rural areas, insecurity of tenure and high production risks, or lack of profitable uses for credit), or to the banking system lacking incentives to lend to small farmers when faced with substantial demand on the part of larger and more creditworthy customers. It seems, however, that there would be a significant additional demand for credit on the part of small- and medium-size farmers if they had access to technological packages capable of significantly raising productivity and incomes, complemented by a sufficiently intensive extension service. On the other hand, some incentives, such as simplified processing of small loans, larger spreads in relending rates for smaller credits, and a higher proportion of loans channelled through cooperatives would have to be provided to banks and other lending institutions to induce them to make larger numbers of small loans. The use of subsidized interest rates, while undoubtedly encouraging use of agricultural

credit, has generally benefited the largest and most creditworthy borrowers, and may have contributed to misallocation of resources and the use of capital-intensive technologies.

12. In spite of the existence of a law and numerous dispositions enabling Brazilian agencies dealing with land reform to carry out in-depth modifications in the agrarian structure of Brazil, the achievements to date have been quite limited and can only be considered a preliminary phase involving setting up a few pilot projects, incorporating a small number of families and covering relatively limited areas. In some of the colonization programs already underway and the proposed land redistribution in the Northeast, the required investment as well as the administrative and technical assistance inputs appear to exceed the allocations of resources for this purpose, particularly if these activities are to be carried out on a scale that would generate significant changes in the overall pattern of income distribution. A new approach is being explored by the Government through the establishment of an interministerial committee to study and prepare integrated rural development projects in selected areas of the Northeast. These projects would provide a package of technical, financial and institutional assistance (credit, research, extension, land redistribution, marketing infrastructure, training, inputs, etc.) aimed at rising productivity and income levels of farmers in a given area. While federal support and the strengthening of the national or regional institutions dealing with a specific service (i.e., EMBRAPA for research, ABCAR for extension, etc.) are crucial for the viability of these projects, their ultimate success will depend on the extent to which they are geared to the specific requirements of a particular target group of farmers, and on the existence of an administrative set-up at the local level with sufficient autonomy to effectively coordinate and deliver the various inputs and services required to improve the productivity and living conditions of those farmers.

13. The Brazilian Government has substantial direct influence over the mobilization and utilization of saving as a consequence of the size and complexity of the public sector, the extent of its participation in the commodity producing sector, and the use of fiscal incentives. In addition, monetary policy is used extensively to influence investment and production decisions. Despite extensive use of fiscal incentives to encourage export-oriented activities, to influence location of industry and to encourage development of the domestic capital market, the Central Government's revenues have proven to be quite buoyant, rising from 9.5% of GDP in 1969 to 13.4% in 1973. Even discounting new taxes and changes in fiscal accounting, revenues have increased 20% faster than GDP. Current expenditures have been averaging about 7% of GDP in recent years, a level lower than that in 1967, reflecting extremely close control over expenditures, especially for personnel. The current account surplus has risen from -0.2% of GDP in 1967 to 4.4%, making possible a rapid expansion of capital expenditures, almost 30%, per year and a virtual elimination of the Government's cash deficit as a generator of monetary expansion and inflationary pressures.

14. The fiscal position of state and local governments, which play a vital role in the provision of education and urban services, has been less satisfactory. Because of gradual reduction of rates on the state value added tax (ICM), the primary source of their revenues, and the questionable practice of some states in granting fiscal incentives to attract industry, state and local revenues have not kept pace with GDP growth. The ICM is levied by the state of origin of products and, as a result, the bulk of the tax base is assigned to more developed states. In order to offset this, a system of intergovernmental transfers has evolved, with revenue sharing formulas designed to assure poorer states higher per capita shares. The amount being transferred has, however, declined relative to GDP. Thus, the fiscal capacity of state and local governments has been limited at a time in which they face increasing needs for both current and capital expenditures. Actual expansion of their current expenditures has been quite restricted, about 5% per year, and while capital expenditures have grown fairly rapidly, they have done so with increasing foreign and domestic borrowing. The fiscal situation of the richer states, which have to bear increasingly heavy costs of urbanization are not sufficiently strong to permit much additional revenue transfer from them to poorer states and the appropriate policy would, therefore, seem to be an increase in the proportion of its revenue shared by the Central Government rather than a change in the allocation of the ICM among the states. The Government has been considering restructuring both the current allocations of ICM receipts and formulas for distributing shared revenues. In addition, proposals to increase the total amount of revenues being shared, especially for the poor states, are under study.

15. Largely because of the strong revenue structure of the Central Government and a policy of pricing publicly produced goods and services which permits sound financial management of government enterprises, prospects for financing public investment over 1974-77 are quite favorable. Investment programs of the central, state and municipal governments, mixed enterprises, autarkies and financial investment planned by government intermediaries indicate an increase in public investment from 13.3% of GDP of 1973 to 13.7% in 1977. Comparing probable fiscal performance over this period, which encompasses the Second National Development Plan, now in preparation, indicates only a modest financing gap, equivalent to 0.3% of GDP by 1977, compared with 2.2% in 1969 and 0.7% in 1973. Such a gap could be financed without recourse to net domestic financing. External borrowing by the public sector of this magnitude would absorb less than 20% of net disbursements on medium- and long-term loans and financial credits in 1977, compared to 46% in 1969 and 23% in 1973 when there was a heavy inflow of financial credits, largely destined for the private sector. Utilization of a higher proportion of external borrowing by the public sector would permit an expansion of public investment beyond the 13.7% of GDP now projected. Use of net external borrowing equivalent to 0.8% of GDP, for instance, would permit an expansion of public investment to 14.2% of GDP and still absorb less than half of this capital inflow. There is, in fact, scope for expanding or accelerating investment in socially oriented activities such as rural development, housing, urban services and education. In addition, a review of public investment planning for 1975-77 and beyond, in the light of recent developments in world petroleum prices, seems warranted. While the power program contemplates no further construction

of fuel oil thermal units, hydroelectric sites which were not considered economic at lower oil prices might be reexamined to determine if additional hydroelectric projects should be programmed beyond 1978. The level of petroleum exploration and drilling activity as well as the magnitude of efforts to develop alternatives to imported petroleum should also be reviewed. The vast expanse of Brazil makes the task of exploration for petroleum very costly both in terms of financial and technical resources. While PETROBRAS is fully technically competent, additional resources that could be provided by foreign oil companies acting jointly with PETROBRAS might be desirable at this time. Finally, national transport planning policy, including highways, railways and urban transport should be reviewed to assure that, given higher petroleum prices, least cost solutions have been reached. Naturally, in planning the overall level of public investment, the total claims on resources must be carefully taken into account.

16. Substantial foreign resources will be required if Brazil is to sustain rapid economic growth over 1974-79. At an 8.5% growth rate of GDP, the amount of medium- and long-term financing required will average US$1.9 billion annually over the period. Analysis of projects included in the 1972-74 investment programs and of projects identified in 1972 as suitable for external financing indicated that external lenders would have to finance approximately 40% of project costs in order to fulfill external capital requirements, a proportion greater than the approximately one-third of project costs attributable to direct and indirect foreign exchange costs. Commitment on these projects was expected by 1975 and the case for local cost financing would have to be reviewed in the light and analysis of the projects considered suitable for external financing included in the 1975-77 investment program.

17. The objectives of Brazilian monetary policy are to control inflation and to influence the generation and allocation of financial savings. The authorities believe that, because of normal supply bottlenecks, residual price increases and external factors, some degree of inflation is probably inevitable. Rather than suppress price increases with controls or through maintenance of artifically low interest or exchange rates, they have followed a monetary policy which has sanctioned a moderate but declining rate of inflation while, through automatic adjustment of key prices and capital values and periodic exchange rate adjustments, preventing price distortions. Monetary programming involves targeting expansion of the money supply consistent with anticipated growth of GDP and the rate of price increase considered acceptable. No attempt is made to limit expansion of domestic credit, which is permitted to grow in accordance with the needs of an economy which is becoming increasingly complex, both in terms of productive interrelationships and financial intermediation. The primary source of expansion of liquidity has been accumulation of foreign exchange reserves resulting from capital inflows, largely in the form of financial credits, reflecting a growing differential between domestic interest rates and the cost of foreign borrowing during 1970-72. While the monetary authorities have used open market operations extensively in the attempt to control monetary expansion, the accelerating inflow through 1972 made it increasingly difficult to do so and action was taken, beginning in the second half of 1972, to directly limit the inflow of financial credits. Acceptable minimum maturities were gradually extended and reserve requirements on the cruzeiro proceeds of these loans were imposed. In the third quarter

of 1973 the minimum maturity was extended to 10 years and a 40% reserve requirement was imposed. While this has greatly reduced the net inflow of financial credits, some reallocation of domestic financing will be necessary if the gap in the supply of longer term credit to industry is to be filled. The reserve requirement was removed only in 1974 while the ten year minimum maturity was retained, in order to help assure a sufficient capital inflow on satisfactory terms.

18. Domestic credit has expanded strongly, rising from 37.6% of GDP at the end of 1968 to 46.3% at the end of 1973. Furthermore, the share of credit to the public sector declined, making possible an extremely rapid expansion of credit to the commodity producing sector, exceeding 50% per year, and increasing from 29.9% to 52.1% of GDP. Despite the rapid expansion of domestic credit there has been no tendency for real domestic interest rates to decline and there has been increased recourse to external credit sources, reflected in a five-fold expansion in the value of foreign financial credits outstanding. Heavy use of foreign credit in the face of rapidly expanding domestic credit is, in part, a side effect of government intervention in financial markets which, by channelling internal financial savings into credit for agriculture and housing, limits its flow into markets like those for industry and commerce where demand may be stronger. The Government is attempting to create an alternative to external financing of the industrial sector by providing additional fiscal incentives to encourage recuperation of the stock market and the establishment of a debentures market. If these measures are not successful in increasing financial saving or inducing its reallocation from other financial assets to industrial investment, the Government may have to relax restrictions on financial credits. Additional measures that might be considered include: (a) giving additional impetus to expansion of the development banking system; (b) providing guidelines and priorities to assure most efficient allocation of funds generated by the Social Integration Program (PIS); and (c) improving the flow of credit to smaller firms through a loan guarantee and technical assistance program. An increased flow of resources from the National Development Bank (BNDE) to medium-size industrial firms which are now eligible for credit from the BNDE's Fund for Financing of Small and Medium Industry (FIPEME) seems warranted. However, the low interest rate on FIPEME operations, 4% plus monetary correction, encourages larger firms which might be able to obtain funds from other sources to seek FIPEME financing. An increase in FIPEME interest rates to 9% to the borrower, the PIS rate, would discourage larger firms from attempting to obtain FIPEME financing and allow smaller firms greater access to these resources.

19. Brazil's recent balance of payments performance has been remarkable. A trade surplus was registered in 1973, the first since 1970, the deficit on the current account declined, private foreign investment increased three-fold, the debt structure underwent considerable improvement, the capacity to import further strengthened as terms of trade continued to evolve favorably and an additional US$2 billion in foreign exchange reserves were accumulated, partly offsetting an increase of US$3 billion in debt outstanding. Although a significant proportion of the 55% increase in merchandise exports in 1973 is attributable to increased commodity prices, about 45% of the increase has been due to increased export volume of commodities such as sugar, soybeans,

iron and of manufactured products. While, in terms of growth rates, manufactured exports, which have grown by 38% per year over 1967-73, have performed spectacularly, diversification of agricultural exports has made a larger contribution to export earnings. Increased exports of agricultural commodities other than coffee has accounted for 46% of growth of total exports over this period while increased exports of manufactures account for 26%. Changes in international currency alignments between 1971 and 1973 seem to have aided Brazil, insofar as they have made Brazilian goods more competitive in Japanese and European markets. While Brazil devalued 8.2% with respect to the dollar from 1971 through mid-1973, depreciation of the dollar over the same period resulted in a cruzeiro devaluation of 17.4% compared to other currencies. However, there has been a relative hardening of the dollar since late 1973.

20. Rapid increases in output and incomes since 1967 have resulted in a substantial increase in demand for imports, especially intermediate and capital goods. Dollar value of imports increased 26% per year during 1967-73. However, imports rose by 43% in 1973, influenced by lags in production of intermediate goods, increased capital goods requirements and higher world prices. Investment increased by more than 20% annually over 1972-73 and domestic capital goods production was not able to keep up with this growth. The excess demand has been filled by imports, with the result that capital goods imports have increased from 38% of the total in 1971 to 43% in 1973. The deficit on non-factor services account increased somewhat more rapidly than total trade between 1967 and 1973. This reflects increased international travel rather than increased use of foreign shipping and insurance. Net interest payments have increased at a lower rate than might have been expected, given the accumulation of external debt, because of interest receipts on foreign exchange reserves. This was an especially important factor in 1973 when interest receipts totalled US$400 million.

21. Rapid growth has brought with it a trend toward large balance of payments' current account deficits. External loan capital has been needed not only to finance these current account deficits but to meet the substantial obligations for amortizing the compensatory debt incurred in the debt rescheduling of 1964. During 1969-71, direct investment and medium- and long-term borrowings combined were not sufficient to provide even one-half of the current account deficit. However, during the past two years the inflow of financial credits has been so strong that they not only have financed the residual capital requirements, but also enabled the country to accumulate large amounts of foreign reserves. However, the relatively unfavorable terms of the financial credits have been responsible for the very large loan repayments that fall due every year. While total debt service as a percent of exports of goods and non-factor services was as high as 43.6% in 1971, with the very strong export performance in 1972 and 1973, and the recent measures the Government has adopted with respect to the flow of financial credits, the debt service ratio has declined.

22. International and multilateral agencies have traditionally provided only a small proportion of total capital requirements, though in recent years their share has been increasing. Suppliers' credits, on the other hand, finance about one-third of the cost of Brazil's capital goods imports. The

year 1973 witnessed substantial improvements in the structure of Brazil's external debt as a result of the stern measures taken by the authorities to restrict the inflow of financial credits. Partly as a result of these restrictions, direct foreign investment increased almost threefold in 1973. During 1972-73, capital inflows from international agencies, suppliers, bilateral lenders, and foreign direct investment were sufficient to finance the current account deficit. The accumulation of foreign exchange reserves during 1972-73, US$4.7 billion, was actually greater than the net inflow of financial credits. Out of total debt outstanding of US$12.6 billion at the end of 1973, over 60% or US$7.8 billion was in the form of financial credits.

23. Despite the large increase in the level of indebtedness during 1972-73, Brazil's external liquidity profile at the end of 1973 was better than at the end of 1967. While the debt service ratio has been declining since 1971, the reserve level in terms of number of months of imports has been increasing since the late 60's. Although total financial credits increased from 35.1% of debt outstanding in 1969 to 61.8% in 1973, control of the terms of these credits has prevented the overall debt service ratio from increasing further. In addition, the level of reserves is now equivalent to 87% of total financial credits outstanding and thus providing a significant cushion of liquidity against a potential net outflow of these credits. Taking that portion of the total reserves exceeding the equivalent of three months' imports and adding these to export earnings would result in a total debt service ratio of 20.6% in 1973 compared to 36.1% if only export earnings are used as a measure to define Brazil's external liquidity.

24. Brazil has become more closely integrated into the world economy than at any time in its recent history and its growth has become more dependent upon and vulnerable to changes in the world economic situation. Recent sharp increases in world petroleum prices have cast a cloud of uncertainty over the course of the world economy over at least the next few years and, because of the dependence of Brazilian growth on the progress of the world economy, the country's development prospects are less clear than at any time since 1968. Brazil is the largest oil importer of the developing nations with imports of crude petroleum in 1973 estimated at 230 million bbl or US$580 million. The more than four-fold oil price increase will therefore have a substantial immediate impact on the balance of payments, adding an amount on the order of US$2 billion to the import bill. The exact amount will depend on domestic petroleum product pricing policy and price elasticity of demand (or alternatively on measures to artificially restrict consumption) and on the rate of growth. Over the longer term petroleum import requirements will depend on the evolution of domestic production; the development of alternative energy sources such as hydroelectric power, atomic power and shale oil; transport sector development strategy, the key elements of which are fuel pricing, railway tariffs and infrastructure development; and the long-term growth of the economy and its sectoral composition.

25. The indirect effects on Brazil of oil price increase may be as important as the direct and more nearly measurable impact on the balance of payments. A slowdown in the rate of growth of the world economy induced by the sharp increases in petroleum prices could have an adverse impact on exports of manufactured goods. In addition, disruption of world capital

markets resulting from the strong flow of financial resources from oil importing to oil exporting countries could affect the flow of loans and direct investment to Brazil. However, because of the high level of foreign exchange reserves Brazil will be able to absorb the short term effects of the petroleum price increase without difficulty. There is no immediate liquidity problem in Brazil, it is only over the longer term that the uncertainties are large.

26. A slowdown is expected in the recent high rate of growth of export earnings from agricultural exports. First, the Bank's Commodity Division expects commodity prices to decline in real terms from their 1973 levels in almost all cases. Second, market prospects for some commodities will be limited by slowly increasing world demand. Finally, export prospects for some products such as beef, corn and cotton will be constrained by rapid growth of domestic demand. If a growth of 20% per year can be sustained for minor exports, total agricultural exports could be expected to grow by 13.3% per year in current prices over 1974-79, compared to 20.0% over 1967-73. Because of the slower export growth anticipated for agricultural commodities, the role of manufactured exports will be even more critical than it has been in recent years. If a 32% growth rate can be sustained (compared to 55% for 1970-73), total exports would grow at a 21% rate.

27. Because of the effect of actual and projected increases in world petroleum prices and the generally less favorable outlook for exports, it is probable that balance of payments' performance over 1974-79 will be less satisfactory than it has been in recent years. This in turn will tend to operate as a constraining factor on the domestic economy. It is projected that as an immediate consequence of increased petroleum prices and an anticipated slowing of export growth the current account deficit will rise to US$3.8 billion in 1974, as compared to US$1.3 billion in the previous year. Projections of balance of payments' performance through 1979, assuming a 10% GDP growth rate and exports as projected in Table 57 indicate a current account deficit widening to US$7.5 billion in that year. Improvements in domestic saving could reduce import requirements, although even a gradual reduction in the growth rate from 10% in 1974 to 8% by 1976 would require a small increase in the average savings rate from 21.5% of GDP in 1973 to 21.6% in 1979. The marginal savings rate this implies, 0.218 is lower than that during 1967-73, 0.288. While sustaining significantly better savings performance should be possible, higher savings rates in the face of deteriorating terms of trade would not be easy and would call for measures by the authorities restraining domestic consumer demand.

28. With exports growing at 21% per year, it should be possible to sustain a growth rate at the lower end of the Government's target of 8 to 10%. With the momentum already built up in the economy, 10% growth of GDP is inevitable for 1974. However, attempting to maintain such a rate of growth would result in steadily widening balance of payments' current account deficits and geometrically rising requirements for borrowing on the world's money markets through the financial credit mechanism. This would not happen if export growth of manufactures could maintain their recent momentum and if the marginal savings rate can be pushed upwards. If this is not feasible the alternative is to move the economy gradually toward a lower growth path -- to 9% in 1975 and 8% in 1976 -- and to sustain an 8% growth rate for the remainder of the

decade. This would still imply a widening of the resource gap from US$681 million in 1973 and US$3,281 million in 1974 to US$3,787 million by 1979. With increasingly larger factor income payments reflecting growing interest obligations on external debt and profit remittances, the current account deficit would grow from US$1,307 million in 1973 to US$3,779 million in 1974 and US$5,869 million by 1979. It should be noted, however, that both the resource gap and current account deficit would, under these assumptions, stabilize toward the end of the decade. Furthermore, in terms of constant 1974 prices, the deficit in 1979 would be $3,970 million.

29. The composition of capital inflows will depend on the condition of world capital markets and also on government policy. The large increase in foreign direct investment into Brazil in 1972-73 to US$940 million has been continuing and a nominal rate of increase of 10% per year is projected for 1974-79. Commitment on suppliers' credits have been projected at 25% of capital goods imports, a proportion somewhat lower than the 30% actually experienced during 1967-73. Commitments by international lending agencies have been projected at US$800 million per year. No reserve drawdown is called for during the period, in line with the Government's policy of maintaining high reserve levels. Financial credits are theoretically the residual item but in fact the availability of these capital inflows on satisfactory terms will be a major determinant of Brazil's growth prospects over the next few years. The difference in external liquidity resulting from a less favorable term on financial credits is substantial.

30. A growth path with GDP increases tapering down to 8% by 1976 would result in an average annual current account deficit of US$4,900 million.[1/] This would require an average net inflow of financial credits of US$2,150 million per year. This compares with a new inflow of US$1,850 million in 1973. Total debt outstanding would rise from an estimated US$12.6 billion at the end of 1973 to US$34.3 billion at the end of 1979. The debt service burden and external liquidity will depend heavily on the term of financial credits. It should be pointed out, however, that most financial credits are variable interest rate obligations carrying interest rates parallel to and slightly above the Eurodollar rate. Annual fluctuations in the rate are likely, and will affect service payments due in any given year. Shorter maturities on financial credits would mean higher annual amortization payments and higher gross borrowing requirements. If minimum maturity on new financial credits is six years, the debt service ratio as conventionally measured would in this case, decline from 36.1% in 1973 to 30.8% in 1979. If a 10-year minimum maturity could be maintained in financial credit inflows, Brazil's external liquidity would be considerably better. In this case average gross financial credit inflows required would be US$3,920 million and the debt service ratio would be 21.6% in 1979. This is obviously a much more desirable outcome but it should be pointed out that in neither case does the debt service burden appear unmanageable over the short run from a liquidity viewpoint, while the resource gap and the current account deficit should tend to stabilize at the end of the decade and then decline over the long run. The major question is whether the international money markets in the years ahead will support the level of borrowing required by Brazil, on acceptable terms.

1/ US$3,940 million in terms of constant 1974 prices.

31. Brazil's growth prospects over 1974-79 will depend heavily on the performance of manufactured exports. The above projections are based on the assumption that the growth of manufactured exports drops rather sharply, to 30% in current prices for 1974-76 and rises to 35% in the latter part of the decade. If, however, manufactured export growth can be sustained at 40% per year, a 10% growth rate of GDP could prove to be feasible. In this case the current account deficit would average US$4,675 million per year. Net annual inflow of financial credits would have to be US$1,849 million assuming a 6-year term on financial credits -- still quite substantial amounts to mobilize. The debt service ratio would be 25.5% in 1979. It should be pointed out, however, that this performance would require an increase in the saving rate to 22.7% of GDP by 1979 implying a substantially higher marginal rate, 0.244 compared to 0.218 at the lower growth path.

32. Multilateral lenders can expect to be called upon to play a more important role in Brazil over 1974-79, not only because the availability of other sources on good terms may be somewhat less ample than in the past but also because multilateral lenders act directly to mobilize other sources of financing and because the level of their activity is taken by the financial community as a measure of the confidence these agencies have in the economic management of the country. While substantially lower levels of commitments by multilateral lenders during 1974-79, even if substituted by financial credits, would have little impact on external liquidity by 1979, this is largely due to lags between commitments and disbursements and implies a stronger effect in the 1980's.

33. Some indications of overheating of the economy were in evidence during 1973 as demand began to outrun domestic supply for intermediate goods, raw materials and to some extent, consumer goods in most instances, for the first time in recent history. Continued rapid growth of the economy in 1974 is likely to result in growing inflationary pressures. These will be intensified by the sharp increase in petroleum prices and a tendency toward accelerating world inflation. While some of the bottlenecks in domestic production can be partially relieved by facilitating imports, some cannot. This would be true, for instance, in the case of bottlenecks caused by pressure on the southern transportation system resulting from increased shipment of agricultural exports, or of shortages of skilled or semi-skilled labor, both of which are likely to become increasingly important in 1974. It is also conceivable that occasional shortages of key agricultural commodities such as beans or rice might occur as domestic demand increases rapidly.

34. The new administration which took office in March 1974 has responded to this situation by developing mechanisms to give it better control over the behavior of aggregate demand. A comprehensive monetary budget has been constructed which brings the Bank of Brazil under the ceilings of the monetary authorities. Moreover, a mechansim has been developed which permits continuous monitoring of credit expansion so that corrective action can be taken, if needed, with minimal lags. The Central Bank intends to permit a maximum 35% expansion of the money supply in 1974 compared to 48% in 1973. The authorities have already permitted corrective price adjustments in the first four months of the year (including a

very substantial increase in gasoline prices) which have resulted in a 17% price increase during this period. They believe that the monetary program will result in a reduction in the annual rate of inflation to less than 20% during the remainder of 1974. In addition, measures have been taken to restrain the growth of consumer credit. Moreover, the monetary program is expected to reduce the real rate of growth, which had been proceeding at a pace well above 10% during late 1973 and early 1974, to 10%. Finally, the authorities have budgeted a substantially greater percentage expansion of agricultural credit than industrial credit, in recognition of the need to encourage production of crops where supply difficulties have been a matter of concern.

35. The Brazilian authorities would prefer to maintain the 10% growth rate achieved in recent years until it proves not to be feasible. They believe that they can, through proper monetary management and sectoral policies, reduce inflationary pressures and improve basic supply factors. In addition, they feel that there has not yet been any indication that their balance of payments' situation has become unmanageable. Ministry of Finance officials feel that a 10% growth rate can be sustained without increasing the current account deficit beyond US$4 billion. They are confident that the recent growth of manufactured exports, which averaged 55% per year over 1970-73 can be sustained. In order to help assure this they are considering rationalizing and improving the system of export incentives. They are also giving additional emphasis to agricultural production for export. The authorities have indicated that if developments in the external sector prove to be adverse, i.e., export growth slackens, reserves begin to decline, and/or foreign capital markets do not apear to be willing to support Brazilian borrowing of the magnitude required on satisfactory terms, they are prepared to tighten management of the economy and sacrifice their growth targets. Moreover, they feel that their actions thus far prove that they have the tools to do so and would not be reluctant to use them.

36. Nevertheless, there is a certain amount of risk implicit in the Brazilian strategy. While the Government's optimism about the future growth of manufactured exports and about their ability to attract funds from the Eurodollar market may prove to be justified, there is the distinct possibility that export growth will slacken and/or that terms and conditions for borrowing through financial credits will harden. If export growth turns out to be below its expectations, the Government could conceivably opt for an alternative of attempting to maintain the rate of growth despite a widening current account deficit by borrowing increasingly larger amounts, thus compromising its external liquidity and becoming dependent upon very high gross borrowing requirements to meet its amortization obligations. A sudden tightening of the world's capital markets could, in addition, lead to the need to accept a substantial shortening of debt maturities in order to maintain financial credit inflows of the volume required. Under these circumstances Brazil could become vulnerable to the necessity for a very severe contraction in the rate of growth.

37. It will be necessary for the Brazilaian authorities to respond as quickly as possible to adverse developments in the external sector, should they arise, by further tightening their control over the growth of domestic demand. Over the next few years policy should be planned on the assumption

of a less propitious external environment than in the last six years, thus calling for lower target expansion rates for domestic spending. The authorities are, however, alert to the risks implicit in their near term strategy and are monitoring the situation closely. The quality of the Government's economic management, the strength of the foreign exchange reserve position and the lack, thus far, of a demonstrable weakening of export performance indicate that the authorities would have both the ability and the margin of time to bring about a reasonably smooth transition to slower growth, if external factors compel them to do so.

I. RECENT GROWTH AND DEVELOPMENT OF THE BRAZILIAN ECONOMY

A. Background

1. The Brazilian economy continues to grow at the extremely rapid pace which began in 1968 with an estimated increase in GDP of 11.4% during 1973. This marks the third consecutive year during which growth of the economy exceeded 10% and the sixth in which it has exceeded 9%. Over the six-year period since the stabilization program of 1964-67 the per capita income of the country has increased 50%, its manufacturing output has doubled, and merchandise exports have grown from less than US$1.7 billion to over US$6 billion. Thus, between 1967 and 1973 there has been a remarkable broadening and deepening of the country's productive base and of its infrastructure, as well as a considerable strengthening of its external sector. Brazil is now the largest economy in Latin America with a national product exceeding that of any other western hemisphere country with the exception of the U.S. and Canada, and somewhat greater than that of the rest of South America less Argentina. Yet, Brazil is still a poor country with a per capita income in the range of US$600, a very unequal income distribution and extensive absolute poverty.

2. The recent growth of the Brazilian economy does not reflect so much sharp changes in either the internal or external economic forces which affect the country but is due rather to a set of economic policies which have allowed the country to take advantage of improved external circumstances and make use of its existing industrial capacity in bringing about increased generation of saving, more efficient resource allocation and better balance of both aggregate demand and supply and imports and exports. A monetary and price program was evolved which instead of artifically suppressing inflation and resulting in price distortions and allocational problems, allowed key prices including interest rates, exchange rates and wage rates to remain in equilibrium. Commercial policy was designed to move the country away from import substitution through a vigorous policy of export promotion aimed at penetration of world markets by nontraditional exports. The fiscal system was completely revamped to eliminate government deficits as a factor in generating inflation, to allow expansion of infrastructure investment and social programs and to permit large fiscal incentives for export and reinvestment of earnings.

3. The growth of the Brazilian economy during most of the postwar era was largely the product of a determined policy of import substitution. Between 1950 and 1961 GDP grew at 6.8% per year while imports increased only 2.1% per year. As a result, the share of imports in GDP fell from 16.4% in 1950 to 8.3% in 1961. This was accomplished through use of a multiple exchange rate policy which, while giving strong incentives to substitution of imports, heavily discriminated against exports. As a result, export volume increased only 1.4% per year during 1950-61 and, with a generally unfavorable evolution of export prices, export earnings stagnated. The resulting imbalance between import requirements and capacity to import led to almost continuous balance

of payments difficulties and chronic inflation. The stabilization program of 1964-67 and the subsequent institutional reforms, rather than merely setting the stage for another round of import substitution by temporarily restoring balance of payments equilibrium by contracting imports and allowing a reconstitution of foreign exchange reserves, permitted sustaining high rates of GDP growth, as balance of payments constraints were eased through vigorous growth and diversification of exports. At the same time, a positive policy toward foreign investment and careful management of the external sector permitted utilization of high levels of external savings.

B. Evolution of Aggregate Supply and Demand, 1967-73

4. After a period of slow growth during stabilization, the expansion of the Brazilian economy accelerated over 1967-73. Growth of GDP averaged 10.2% per year compared with 6.8% per year during the import substitution led growth of the 1960's. The change in the composition of expenditure on GDP during the last six years has been so great that it appears a real structural transformation has taken place. These changes have been led by the growth of exports which (with adjustment for terms of trade) grew 18.5% per year, reaching 10.6% of GDP in 1973, compared with only 6.8% six years earlier. The expansion of exports was broadly based, increasing in dollar terms 25.0% per year. The most rapid increase has been in manufactured products the dollar value of which grew at 38.0% per year or from 12.2% to 22% of total export value. At the other extreme, coffee exports grew relatively slowly (and almost entirely because of rising world prices). The 10.6% growth rate of coffee exports resulted in a decline in their share of the total from 44.3% in 1967 to only 21.7% in 1973. The contrasting performance of coffee and manufactures highlights the diversification of exports that has taken place. There has also been a growth and diversification within the agricultural export category led by soybean exports which increased in value from US$39 million in 1967 to almost US$917 million in 1973.

Table 1: COMPOSITION AND GROWTH OF GDP, 1967-73

	(Million 1968 Cr$)		Composition (%)		Growth Rate
	1967	1973(Est.)	1967	1973	1967-73
GDP	91,368	163,181	100.0	100.0	10.2
Terms of Trade	258	3,819	0.3	2.3	
Imports GNFS	6,281	19,018	6.9	11.7	20.0
Exports GNFS /1	6,218	17,233	6.8	10.6	18.5
Resource Gap	63	1,785	0.1	1.1	
Available Resources	91,689	168,785	100.4	103.4	10.7
Consumption	77,259	131,915	84.6	80.8	9.3
Gross Domestic Investment	14,430	36,870	15.8	22.6	16.9
Gross Domestic Savings	14,367	35,085	15.7	21.5	16.1
Factor Payment Less Current Transfers	764	1,641	0.8	1.0	
National Savings	13,603	33,444	14.9	20.5	16.2

/1 Adjusted for terms of trade.

Source: Appendix Table 2.6.

Table 2: COMPOSITION AND GROWTH OF EXPORTS, 1967-73
(million US$)

	Total		Composition (%)		Growth Rate
	1967	1973(Est.)	1967	1973	1967-73
Coffee	733	1,343	44.3	21.7	10.6
Agricultural Products	426	2,517	25.7	40.6	35.0
Minerals	131	407	7.9	6.6	21.0
Semi-Processed and Manufactured	341	1,841	20.6	29.7	32.0
Semi-Processed	(139)	(475)	(8.4)	(7.7)	22.2
Manufactured Products	(202)	(1,366)	(12.2)	(22.0)	38.0
Other	23	90	1.4	1.4	25.5
Total	1,654	6,198	100.0	100.0	25.0

Source: Central Bank and Mission estimate.

5. The growth of the Brazilian economy has been accompanied by a more than equally steep rise in import requirements. Import elasticity with respect to GDP growth was 1.96% over 1967-73, as virtually all categories of merchandise imports rose sharply. Imports rose by 27.0% per year in U.S. dollars, led by a sharp increase in requirements for capital and intermediate goods. The growth of imports accelerated in 1973 because of much larger than average wheat purchase, necessitated by the failure of the domestic crop, shortages of raw materials and intermediate products such as pulp, petrochemicals and ferrous metals resulting from increases in domestic demand outstripping expansion of production, and rising imported fuel requirements and increasing petroleum prices.

Table 3: COMPOSITION AND GROWTH OF IMPORTS (FOB), 1967-73
(million US$)

	Total (million US$)		Composition (%)		Annual % Increase
	1967	1973 (Est)	1967	1973	1967-73
Consumer Goods	336	899	23.4	14.8	17.8
Wheat	(153)	(334)	(10.6)	(5.5)	(13.9)
Other	(183)	(565)	(12.7)	((9.3)	(20.5)
Intermediate Goods and Raw Materials	574	2,517	39.8	41.4	28.0
Petroleum (Crude)	(111)	(579)	(7.7)	(9.5)	(32.0)
Chemicals	(216)	(849)	(14.9)	(14.0)	(25.7)
Metals	(131)	(675)	(9.1)	(11.1)	(31.4)
Other	(116)	(414)	(8.0)	(6.8)	(24.0)
Capital Goods	515	2,599	35.7	42.8	31.0
Other	16	60	1.1	1.0	24.6
Total	1,441	6,075	100.0	100.0	27.0

Source: Central Bank, Bank of Brazil (CACEX) and Mission estimate.

6. Brazil has been able to generate very high rates of growth during the last six years with relatively modest investment expenditure as indicated by an implicit incremental output ratio for 1967-73 of only 1.8. This, to some extent, reflects the presence of excess industrial capacity at the beginning of the period. However, the implicit ICOR has increased gradually during 1970-73 (from 1.61 to 1.85) with utilization of excess capacity, gross investment has increased at 16.5% per year, or from 15.8 to 22.6% of GDP. Consumption has, on the other hand, increased more slowly than GDP, albeit at 9.3% per year it can hardly be said to have been severely restricted. Savings have been considerably higher relative to GDP, as with a marginal saving rate of 0.288, domestic savings have risen from 15.7 to 21.5% of GDP.

Table 4: SOURCES AND USES OF RESOURCES, 1971-73
(% of GDP)

	1971	1972	1973	Increase 1971-72	Increase 1972-73
GDP	100.0	100.0	100.0	10.4	11.4
Terms of Trade	1.0	1.4	2.3		
Imports	10.0	11.1	11.7	23.0	17.0
Exports	7.9	9.1	10.6	28.1	29.1
Resource Gap	2.1	2.0	1.1		
Available Resources	103.1	103.4	103.4	10.7	11.4
Consumption	83.7	82.3	80.8	8.5	9.4
Gross Investment	19.4	21.1	22.6	20.5	19.1
Domestic Savings	17.2	19.1	21.5	22.5	25.2

Source: Appendix Table 2.6.

This improved savings performance probably reflects a cautious wage policy as well as a substantial improvement in public sector fiscal performance and improved terms of trade. Despite the improved savings performance, the rate of increase of investment exceeded that of savings with the result that the resource gap, which had been reduced to 0.1% of GDP at the end of stabilization, increased substantially (as reflected in the more rapid growth of imports than exports). Although the resource gap stood at a fairly modest 1.1% of GDP in 1973, it has been as high as 2.1% of GDP in 1971. The decline in the resource gap in more recent years is attributable to a rapid increase in savings, which may, at least in part, be due to the very favorable recent evolution of export prices. It is possible that the narrowing of the resource gap may not represent a trend but may reflect a lag between increased incomes due to improved terms of trade and increases in consumption and imports.

C. Sectoral Growth Trends

7. The growth of the Brazilian economy since 1967 has been led by increases in industrial output, which has grown at 12.9% per year. The increase in the production of this sector has accounted for 36.7% of the total increase in NDP and its share of domestic product has increased from 27.0% in 1967 to 31.2% in 1973. An indication of the accelerated process of industrialization of the Brazilian economy is the fact that, while in 1950 agricultural output was 10% higher than that of industry, by 1953 the output of the two sectors was approximately equal, by 1967 industrial output was about 40% greater and by 1973 it was more than double that of the agricultural sector. This is not a reflection of poor performance of agriculture which grew at 5.5% per year during 1967-73, a rate higher than the historical average and one which would be considered acceptable by conventional standards.

Table 5: SECTORAL GROWTH AND COMPOSITION OF DOMESTIC PRODUCT
(Millions of 1968 Cr$)

	Value		Composition (%)		Rate Increase
	1967	1973	1967	1973	1967-73
NDP at Factor Cost	71,611	127,855	100.0	100.0	10.2
Agriculture	13,685	18,905	23.3	14.8	5.5
Industry	19,300	39,933	27.0	31.2	12.9
Mining	(218)	(532)	(0.3)	(0.4)	(16.0)
Manufacturing	(16,366)	(34,161)	(22.9)	(26.7)	(13.0)
Construction	(975)	(1,952)	(1.4)	(1.5)	(12.3)
Services	38,626	69,047	53.9	54.0	10.2
Transport and Communications	(4,230)	(7,544)	(5.9)	(5.9)	(10.1)
Commerce	(9,195)	(17,307)	(12.8)	(13.5)	(11.1)
Other	(25,201)	(44,196)	(35.1)	(34.6)	(9.8)

Source: Fundacao Getulio Vargas and Mission estimates.

8. Industry. The increasing importance of the industrial sector reflects the rapid growth of manufacturing, where value added in 1973 was more than double, in real terms, the level in 1967 (implying a 13.0% annual rate of growth). The growth of the manufacturing sector has, in fact, been accelerating, as the annual percentage increases in production have grown every year since 1968. The expansion of the sector has been characterized by the development of sophisticated capital and consumer durable goods production and a decrease in the relative importance of traditional (and employment intensive) industries such as food products and textiles. Chemicals and transport equipment have played an especially important role in industrial development together accounting for more than 40% of the increase in manufacturing output. Annual production of passenger automobiles, for instance, increased from 132,000 units per year in 1967 to 409,000 in 1972 and the production of trucks and buses has more than doubled. Trends in industrial production by sub-group for 1973 indicate continuation of the strong growth of the consumer durables sector registered over 1968-72. Capital goods production, which had been identified as a lagging sector in the past, has accelerated, with annual increases exceeding 20% in 1971-72 and continuing into 1973. The relative share of domestic equipment in industrial investment now stands at about 75% compared to less than 70% in the late 1960's. In addition, a significant increase in output has been registered in 1972-73 in the labor intensive textile industry, partly as a result of increased supply of both natural and synthetic fibers and partly as a result of strong external demand.

Table 6: INDUSTRIAL GROWTH RATES BY MAJOR GROUP, 1968-72
(Percentages)

	1968	1969	1970	1971	1972
Consumer Non-Durables	13.1	9.2	5.6	2.0	7.8
Consumer Durables	24.8	25.0	7.6	17.7	20.8
Intermediate Goods	16.5	9.5	14.5	11.5	12.5
Capital Goods	27.0	6.1	12.6	23.5	21.8

Source: IPEA.

Table 7: STRUCTURE AND GROWTH OF MANUFACTURING INDUSTRY, 1967-73

	Value /1		Composition (%)		Rate of Increase	Percent of
	1967	1973	1967	1973	1967-73	Increase
Food, Beverage, Tobacco	3,028	5,260	18.5	15.4	9.6	12.6
Textiles, Clothing	2,127	3,791	13.0	11.1	10.1	9.4
Paper	524	820	3.2	2.4	7.7	1.7
Rubber	295	683	1.8	2.0	15.0	2.2
Chemical	3,011	6,934	18.4	20.3	14.9	22.0
Non-Metallic Mineral	914	1,845	5.6	5.4	12.4	5.2
Machinery	1,832	4,065	11.2	11.9	14.2	12.5
Transport	1,375	4,782	8.4	14.0	23.1	19.1
Metallurgy	1,718	3,347	10.5	9.8	11.8	9.2
Other	1,571	2,634	9.6	7.7	9.0	6.0
Total	16,366	34,161	100.0	100.0	13.0	100.0

/1 NDP at factor cost estimated from Producao Industrial 1969 base using annual indexes by industry from IPEA.

Source: IPEA and Mission estimates.

9. The development of Brazilian industry seemed to be entering a new phase in 1973 with the utilization of virtually all existing excess capacity in key manufacturing subsectors. It has been estimated that at the beginning of accelerated growth in 1967 excess capacity was equivalent to 30% of installed capacity. By 1970, however, industrial surveys were indicating average capacity utilization of 85%. In the first quarter of 1973, firms in many critical industries, such as non-metallic minerals, metallurgy, mechanical equipment, paper, rubber, chemicals and textiles reported capacity utilization between 90 and 95%. The strong demand for industrial products both for consumption and investment combined with capacity limitations in these industries began to result in supply bottlenecks during early 1973. These were especially evident for intermediate goods, principally petrochemicals, paper, steel and other metals, as well as for some consumer goods, mainly automobiles and television sets. The Government temporarily reduced import duties on many of these intermediate goods in order to alleviate these bottlenecks and forestall price increases which might have endangered the achievement of its inflation control targets. It has indicated that these tariff reductions might be extended indefinitely to increase competition for domestic industry. Despite the tariff reductions, there have been some lags in fulfilling manufacturers' orders and in deliveries and industrial growth slackened somewhat in the second quarter.

10. A positive aspect of these developments is that increased utilization of industrial capacity has been accompanied by an acceleration of industrial employment. After several years when rapid growth of manufacturing output seemed to have relatively little impact on employment there was a notable increase in 1972 and a rapid rise in 1973, as many firms seemed to be moving toward multiple shifting. Manufacturing employment in the first five months of 1973 showed an 8.3% increase over the first five months of 1972. In addition, real wages in manufacturing were up 6.4% over those in the first five months of 1972.

11. The Government is not overly concerned about shortages of consumer durables although a "grey market" has developed with under-the-counter payments to reduce delivery times and resales becoming common. It believes that capacity is in the process of being expanded and that the maturity time for such investment is short. Furthermore, with multiple shifting becoming more common the problem is likely to be temporary. It is also not believed that capacity limitations will affect the country's ability to sustain growth of industrial exports. On the other hand, the Government is particularly concerned about lagging development in some intermediate goods industries, especially steel. Demand for steel is increasing rapidly while production so far this year is up less than 10% over the same period last year and projected steel imports for the year are 2.5 million tons. The Government, through the Ministry of Industry and Commerce, has recently created a holding company, SIDERBRAS, to hold its participation in the National Steel Company (CSN) and other steel firms to be established in the future. A second holding

company, The National Steel Development Company (CNDS), is to be established to consolidate the National Development Bank's (BNDE) holdings in the two other major steel enterprises, USIMINAS and COSIPA, and several other companies. Finally, the National Council for the Steel INdustry (CONSIDER) has been established as the national planning agency for the steel sector. However, CONSIDER and SIDERBRAS, which have recently been formed, do not seem to have the political strength to resolve interfirm differences and assure rational development of the industry, including allocation of increased capacity between state and private producers. Petrochemicals are also a matter of concern to the Government. Although several projects have been approved for the Bahia petrochemical pole, doubts persist about the adequacy of gas reserves. In the South, PETROBRAS has found it necessary to purchase a majority interest in Petroquimica Uniao as the latter was virtually bankrupted by cost overruns in construction of its Sao Paulo facilities.

12. Agriculture. While agricultural growth has been lower than that of other sectors, its performance has not been unsatisfactory as output has increased by 5.5% per year since 1967 while the rural population has been growing by less than 1% annually. The agricultural sector has, thus, been able to supply Brazil's growing internal demand for food and fibers while producing a rising volume of export commodities. During this period, Brazil has become the world's largest exporter of sugar and its second largest supplier of soybeans, while remaining the world's leading coffee producer. Coffee continues to play a very important role in the agricultural sector, accounting for about 15% of output. Annual variations in coffee production, largely resulting from frosts, are generally responsible for year-to-year fluctuations in growth of the sector. Coffee production in 1969 and 1973 was adversely affected by frosts during the preceding years. The 1972 frost which hit northern Parana resulted in a nearly one-third decline in coffee production in 1973 which is estimated to have reduced overall growth of the agricultural sector by three percentage points and the overall growth of GDP by one point. Recovery of coffee production in 1974 is expected to have a positive effect on the growth of the sector and of total GDP.

13. Agricultural production has proven to be very responsive to price incentives. This is evidenced by the extraordinary growth in production of export crops, especially soybeans, the production of which increased at an average of 35% per year in the period 1967-72. Strong growth has also been recorded in production of oranges (for juice, which is exported), sugarcane and cotton. The modest growth of overall agricultural output in 1972 and 1973 (about 4.5% per year) is largely attributable to adverse climatic conditions for cacao, in both 1972 and 1973, for coffee, especially in 1973, and for wheat in 1972. The relatively modest increase in physical production was, however, accompanied by a substantial improvement in the terms of trade of the sector, so that rural incomes have actually increased quite rapidly in the last two years.

Table 8: BRAZIL-INDUSTRIAL OUTPUT AND EMPLOYMENT BY REGION, 1969-73

(1969 = 100)

	Index, 1969 = 100						Annual Increase (%)			
					January-May					May 1972-
	1969	1970	1971	1972	1972	1973	1970	1971	1972	May 1973
Value of Production										
Brazil	100.0	112.2	124.6	144.9	133.3	155.7	12.2	10.1	16.3	16.8
São Paulo	100.0	112.4	128.8	154.6	136.9	160.6	12.4	14.6	20.0	16.9
Guanabara	100.0	105.4	107.0	116.7	107.2	126.4	5.4	1.5	9.1	17.9
Rio Grande do Sul	100.0	103.9	123.9	149.8	149.6	163.6	3.9	19.2	20.9	9.4
Minas Gerais	100.0	112.4	126.3	145.6	138.7	157.1	12.4	12.4	15.3	13.2
Pernambuco	100.0	107.5	103.8	124.0	119.6	132.0	7.5	-3.4	19.5	10.4
Employment										
Brazil	100.0	100.5	105.1	110.8	108.4	117.4	0.5	4.6	5.4	8.3
São Paulo	100.0	100.6	104.8	111.4	108.4	118.8	0.6	4.2	6.3	9.7
Guanabara	100.0	100.5	104.5	105.2	104.6	109.3	0.5	4.0	0.7	4.5
Rio Grande do Sul	100.0	99.3	111.3	120.4	119.2	129.2	-0.7	12.1	8.2	8.4
Minas Gerais	100.0	101.9	103.5	106.5	104.3	111.1	1.9	1.6	2.9	6.5
Pernambuco	100.0	99.1	100.6	102.9	102.4	105.2	-0.9	1.5	2.3	2.8

Source: IPEA - Boletim Econômico.

Table 9: GROWTH OF AGRICULTURAL PRODUCTION, 1971-72

Crops	1971 Production ('000 tons)	1971 Value (Million Cr$ of 1971)	1972 Growth in Production (%)	1972 Value (Million Cr$ of 1971)
Coffee	24,600 1/	3,841	-4.5	3,668
Sugarcane	80,380	1,902	4.6	1,989
Cacao	219	338	0.9	341
Soybeans	2,077	795	30.2	1,035
Cotton	2,271	2,111	10.6	2,335
Corn	14,130	2,706	5.4	2,852
Beans	2,688	1,842	-0.4	1,835
Rice	6,593	2,568	17.2	3,010
Manioc	30,229	1,796	-2.3	1,755
Wheat	2,011	1,085	-51.1	531
Potatoes	1,580	455	-2.6	443
Peanuts	945	552	1.2	559
Bananas	505 2/	858	3.5	888
Oranges	16,284 3/	555	15.7	642
Other	-	2,673	18.6	3,170
Value of Output	-	24,077	-	25,053
Aggregate Growth	-	-	-	4.1

1/ In 1,000 bags of 60 kgs.
2/ In 1,000 bunches.
3/ In million fruits.

Source: Ministério da Agricultura (EAGRI/SUPLAN).

14. The sharp increases in international demand for and prices of major agricultural commodities, in addition to swelling rural incomes, has led to marked changes in the price/cost relationships not only of traditional export crops such as coffee, cacao and cotton, but also of other products which have recently emerged as exports, such as soybeans, beef and orange juice. These changes in relative profitability are generating longer term shifts in the structure and location of production. The vast expansion of soybean production from 750,000 tons in 1967-68 to an estimated 5 million tons 1972-73 harvest is having a strong impact on the structure of southern agriculture. Soybeans are beginning to replace coffee on the frost-prone marginal plantations of Parana and coffee plantings are spreading northward to Mato Grosso and Minas Gerais, and beef production has extended through the north of Parana and south of Mato Grosso into the northeast of Mato Grosso and south of Para. Soybean production has become temporarily competitive with wheat, largely because of an inadequate support price for wheat, as some farmers chose to forego wheat planting which enabled them to plant soybeans earlier and obtain higher yields. Over the longer term, however, wheat is likely to expand as a natural complement to soybeans, with which it is normally rotated. Corn production, which has competed with soybeans for the same land in the south, was adversely affected in 1973 as production declined 4% but there is evidence that plantings are rising again as more natural pastures are being brought into cultivation. Pressure on land resources in the south is encouraging an accelerated opening up and conversion to commercial agriculture and livestock production of important areas in Goias, Para and Mato Grosso, which is being facilitated by an ambitious Government program of highway construction, credit and granting of land titles.

15. Changes in the balance between production for domestic consumption and export of agricultural commodities have led the Government to adopt a number of short and longer term measures to stimulate production and prevent increases in domestic prices of food and fibers. Support prices and credit availability for 1973-74 for products mainly for domestic consumption, i.e., corn, beans and cotton, have been increased more than those for export crops. Allocation of credit for planting soybeans in 1973 was conditioned on farmers increasing plantings of corn and beans, and additional price incentives have been offered for increased wheat production. In addition, the Government has imposed mild export quotas on cotton, corn and soybeans, as well as strengthening credit and extension programs in order to raise the productivity of cultivation of these products through use of more modern techniques and inputs.

16. The livestock industry has been a particularly difficult problem for agricultural policymakers. The rapid expansion of beef exports in the early 1970's and the country's naturally favorable factor endowment induced the Government to commit itself to an ambitious program of expansion of livestock production and beef exports. However, by late 1972, and throughout 1973, the pressure of increasing domestic demand for beef, coupled with stabilization of beef production (slaughter) resulting from investment in the form of herd buildups, put severe pressure on domestic beef prices. The

Government decided that it was necessary, in view of its commitment to reduce inflation, to limit exports. Throughout most of 1973 the Government struggled, without much success, using export quotas, export taxes, price controls and domestic tax reductions, to stem rising domestic beef prices. By late 1973, however, domestic beef prices had risen above prices received by exporters and the Government permitted beef imports (nevertheless, because of export taxes, the domestic price of beef to consumers is still below the world price). While the general performance of the beef industry has been quite favorable, with expanding herds and increasing productivity, especially in the Center-West region rapidly growing disposable incomes and high income elasticity of demand for beef raise questions about the longer term prospect for beef exports from Brazil.

17. In conclusion, both the agricultural and industrial sectors are manifesting symptoms of short-term capacity limitations. The situation seems to be less serious in the agricultural sector where, except in the case of beef, productive capacity can be expanded relatively rapidly. Limitations on Brazil's capacity to produce industrial raw material and intermediate goods will be more difficult to overcome over the near term and maintenance of high rates of economic growth will probably imply higher import requirements. The tight domestic supply situation in some subsectors of both agriculture and industry combined with rising world prices of Brazil's imports, especially petroleum and petrochemicals, will make further reductions of the rate of domestic inflation extremely difficult to achieve. In fact, continuation of the present high rate of economic growth could be accompanied by some acceleration of inflation.

D. Control of Inflation

18. Gradual reduction of the rate of inflation is one of the highest priority objectives of the Brazilian authorities and inflation has, indeed, been reduced, slowly but surely. This has been accomplished within a policy framework designed to prevent price distortions. The target for 1972-74 was reduction of inflation by 3 percentage points per year, the key index for the Government's target being the Guanabara (Rio) cost of living index. A substantial improvement in price performance can be noted for 1972 when the reduction in the increase of cost of living was 4 percentage points. This reflected a more moderate increase in food prices compared with the previous year because of better agricultural performance, insofar as production for domestic consumption is concerned. The Government also took direct action to dampen the impact of general rises in international prices by reducing indirect taxes on foodstuffs and fuels.

Table 10: TRENDS IN PRINCIPAL PRICE INDEXES
(Percentage change during period)

	General Price Index /1	Wholesale Prices /2 Total	Wholesale Prices /2 Food	Cost of Living (Guanabara) Total	Cost of Living (Guanabara) Food
1967					
1968	24.9	24.2	21.7	24.0	17.7
1969	20.1	19.2	29.0	24.2	30.9
1970	19.3	18.5	18.3	20.9	20.9
1971	19.5	21.4	30.2	18.1	19.8
1972	15.5	16.1	16.0	14.0	16.1
1973					
January-September					
1972	16.8	12.3	12.0	12.1	14.0
1973	11.4	11.2	10.4	9.4	10.5

/1 Weighted average of wholesale price index, Guanabara cost of living and Guanabara construction cost.

/2 Excludes export products.

Source: Fundacao Getulio Vargas.

19. The Government established a target of 12% for the increase in the cost of living index for 1973. By the end of September, prices had risen 9.4% a level generally consistent with this target. However, in order to achieve this the Government has been forced to take measures to somewhat artifically dampen the impact of market forces on prices. Meat prices, which have a fairly heavy weight in the cost of living, received special attention. Exports of livestock feeds were limited, albeit mildly, beef export quotas were imposed, an export tax was introduced and the state value added tax on beef was reduced. In addition the tax on industrialized products (IPI), on medicines and some consumer goods was reduced. The domestic price of wheat has also been held below a level sufficient to cover the weighted average cost of domestic and imported wheat marketed through the National Supply Commission. Increases in the prices of many public utilities have been delayed (e.g., telephones and trains), although substantial increases were permitted for most utilities in 1972. Despite these measures there is strong possibility that the increase in the cost of living will somewhat exceed the target. This is largely due to a surge of beef and dairy product prices and increases in fuel prices in the last quarter of the year. While the cost of living increase for 1973 has been moderated, it should be noted that the decline in the rate of inflation as measured by the wholesale price index has been much less substantial.

20. The Government has been forced to take extraordinary measures to contain inflation. While they do not seem to have yet arrived at a point where inflation could be said to have been suppressed unduly or where there is a serious problem of price distortions there is a danger that continuation of such a policy would produce problems. Had the authorities accomplished nothing more than stabilizing domestic inflation it would have been remarkable in view of the trend toward increasing rate of international inflation. It should be pointed out, however, that increasingly tight industrial capacity situation, raw material bottlenecks and rising international prices, will make maintaining relative price stability a more difficult task. A situation should be avoided where price relationships are allowed to become distorted once again in order to achieve some predetermined target for overall inflation.

E. Population Growth and Migration

21. The rapid economic growth of the Brazilian economy over the past six years has undoubtedly resulted in a strengthening of the process of urbanization and southward and westward migration which have been the major features of population dynamics over the past twenty years. In 1950, Brazil was still predominantly a rural nation with approximately 64% of its population in the countryside. By 1965, the rural and urban populations were probably equal and the 1970 census found only 44% of the country's 93 million people lived in rural areas. Between 1960 and 1970 the rural population increased by 2.6 million or 0.7% per year, while the urban population increased by 21 million or 5.2% per year. It is estimated that during the intercensal period 10 million people migrated from rural to urban areas. By 1970, one-fourth of Brazil's population was concentrated in nine large metropolitan areas. However, the most rapidly urbanizing areas were the smaller cities, those with a population between 10,000 and 100,000, whose population grew at an annual average rate in excess of 9%.

22. The overall statistics on population movements hide some important regional differences. While the growth rate of total rural population was only 0.7% per year, this was strongly influenced by a decline in the rural population of the more developed Southeastern region. The rural population of the state of Sao Paulo, for instance, fell by 1.3 million, as urbanization of the region accelerated. The state also absorbed almost a million migrants from other areas of the country, or 30% of Brazil's total interstate migrants during 1960-70, the vast majority of whom settled in the Greater Sao Paulo area where the population has increased by 3.4 million in ten years. The rapid urbanization of Brazil, as exemplified by Sao Paulo and other major metropolitan areas, is placing a heavy strain on the social and economic infrastructure of these regions and is resulting in a decline in their ecological conditions. The increasing costs of urbanization and its impact on the finances of state and local governments in the more developed states limit the extent to which the federal government can transfer fiscal resources from the richer to the poorer areas of the country.

Table 11: TRENDS IN REGIONAL[1/] POPULATION MOVEMENTS, 1950-70

	Percent of Total			Rate of Increase		Rate of Migration[2/]		Growth of Urban Population		Growth of Rural Population	
	1950	1960	1970	1950-60	1960-70	1950-60	1960-70	1950-60	1960-70	1950-60	1960-70
Region											
North	3.6	3.7	3.9	3.5	3.4	0.4	2.7	5.4	5.3	2.5	2.1
Northeast	34.6	31.6	30.3	2.2	2.4	-0.9	-5.1	4.9	4.5	1.1	1.1
Southeast	43.4	43.8	42.7	3.3	2.6	-3.1	-5.6	5.2	5.1	1.2	-1.9
South	15.1	16.8	17.6	4.2	3.4	8.2	5.6	6.8	5.0	2.9	2.2
Center-West	3.4	4.2	5.5	3.3	5.6	22.5	23.2	9.5	8.9	4.1	3.2
Total	100.0	100.0	100.0	3.2	2.9	(-)5.5	(-)4.5	5.5	5.2	1.1	0.7

1/ North: Amazonas, Pará, Acre, Amapá, Roraima, Rondônia.
South: Paraná, Santa Catarina, Rio Grande do Sul.
Southeast: Guanabara, São Paulo, Rio de Janeiro, Espírito Santo, Minas Gerais.
Northeast: Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe, Bahia.
Center-West: Mato Grosso, Goiás, Federal District.

2/ Percent of population in initial year.

Source: Appendix Tables 1.1 and 1.9.

23. Because of outmigration the Northeast was the slowest growing region of Brazil with a demographic growth rate of 2.4% per year during the 1960's. The rate of outmigration was, however, lower than that during the drought-stricken decade of the fifties. Despite regional outmigration and rural-urban migration, the population of the rural Northeast increased 1.1% per year and with 40% of the rural population of the nation, the Northeast presents the most vexing problems for the alleviation of poverty. It should be pointed out that statistics on interregional migration are strongly influenced by the classification of the border state, Minas Gerais, in the southern region rather than in the Northeast. This state, which shares many of the characteristics of the northeastern states, has traditionally been a major supplier of population to other areas and during the past decade 40% of Brazil's interstate migrants came from Minas Gerais. If this state were included in the Northeast, the region would show a higher growth of urban and lower growth of rural population.

24. Increasing urbanization of Brazilian society has been the major factor explaining the decline in the overall rate of population growth from 2.99% during the 1950's to 2.83% during the 1960's. During the past decade the birth rate, which had remained virtually unchanged from the 1920's, declined by almost 13% (from 43.3 to 37.7 per thousand) so that, despite another substantial drop in mortality, the rate of growth of population is decelerating rather than accelerating as it did with rapidly falling mortality during 1920-60. The behavior of mortality and natality suggest an even more rapid decline in the overall rate of population growth for the 1970's. However, despite this, and a declining rate of participation in the labor force because of rising school enrollments, Brazil's labor force was increasing at an annual rate of 2.7% per year in the early 1970's, or the equivalent of 800,000 new entrants per year.

Table 12: ANNUAL RATES OF POPULATION GROWTH, 1920-70

	Natality	Mortality	Immigration	Total
1920-40	4.40	2.53	0.18	2.05
1940-50	4.35	2.01	0.04	2.33
1950-60	4.33	1.34	0.00	2.99
1960-70	3.77	0.94	0.00	2.83

Source: IBGE, Boletim Demografico.

25. In addition to rural-urban and interregional migration, Brazil has been experiencing an accelerated expansion of the agricultural frontier to the west, into the states of Goias and Mato Grosso, and to the north, into

the Amazonian region. In the 1940's and 1950's rural settlement was concentrated in the state of Parana. This development, which was largely an extension and expansion of the Sao Paulo coffee economy, was carried out with little Government assistance, even for infrastructure, by private land companies. It predominantly involved relatively small farmers, as 80% of land sales in the region were in plots of 40 hectares or less. During the 1960's and into the 1970's, the locus of agricultural settlement has shifted to the Center-West and, more recently, the Amazon. The rural population of the states of Mato Grosso and Goias which together account for 22% of Brazil's land area (or an area larger than western Europe) increased 3.2% per year during the 1960's. While part of this has been along the lines of the Parana model, much of it has been an extension of the northeastern pattern subsistence farming and sharecropping by migrants following the opening of major road systems. The even more recent growth of settlement of the Amazon, stimulated by construction of the Transamazon highway, is a similarly mixed picture of highly organized colonization projects, spontaneous settlements and large commercial establishments.

F. Wages, Employment and Income Distribution

26. There is no doubt that Brazil experienced a substantial reconcentration of income during the period 1960-70. This fact was brought sharply into focus by the results of the 1970 census of population which showed that although all income groups experienced absolute increases in real incomes, the share of total income received by the top 10% of income recipients increased while that of every other decile declined. While point-to-point comparisons leave many questions unanswered and there are methodological difficulties involved in deriving comparable income figures for the two census years, the relative gain in income for the highest income groups was so large as to make the conclusion inescapable that income distribution in 1970 was more concentrated than that in 1960. In the most aggregate terms, in 1970, 75% of the population received 33% of income with a mean level of Cr$ 124 per month (US$240 per year), while the top 25% commanded 67% of income with a mean level six times as high. Furthermore, probably about 40% of the population had an income below the minimum wage in 1970. It should be pointed out, however, that data for 1970 do not permit a fair test of the effect of Brazil's recent growth on income distribution or on absolute levels of poverty. The 1960's were a period of rapid economic change during which there were three phases of development: inflation and import substitution during 1960-63, stabilization in 1964-67 and rapid growth from 1968 onward. It is possible that a considerable part of the deterioration of income distribution occurred during the stabilization phase when nominal wages were restrained while some key prices were decontrolled, resulting in a decline in real wages.

Table 13: SIZE DISTRIBUTION OF BRAZILIAN INCOME 1960 AND 1970

Deciles	% Share of Total Income 1960	1970	% Increase	Average Monthly Income (1970 Cr$) 1960	1970	Average Annual % Increase
1st	1.17	1.11	-5.13	25	32	2.5
2nd	2.32	2.05	-11.64	48	58	1.9
3rd	3.42	2.97	-13.16	71	84	1.7
4th	4.65	3.88	-16.55	96	110	1.4
5th	6.15	4.90	-20.32	127	139	0.9
6th	7.66	5.91	-22.75	158	168	0.6
7th	9.41	7.37	-21.68	195	210	0.7
8th	10.85	9.57	-11.80	225	272	1.9
9th	14.69	14.45	-1.64	305	411	3.1
10th	39.66	47.79	20.50	815	1,360	5.2
Highest 5%	27.69	34.86	25.90	1,131	1,984	5.8
Highest 1%	12.11	14.57	20.32	2,389	4,147	5.7
Lowest 40%	11.57	10.00	-13.57	60	71	1.7
Middle 20%	13.81	10.81	-21.73	142	153	0.7
Highest 40%	74.62	79.19	6.13	385	563	3.9
Total	100.00	100.00		206	282	3.2

Source: Carlos Langoni "Distribuicao da Renda e Desenvolvimento Economico do Brasil" (Rio de Janeiro: Editorial Expressao e Cultura, 1973).

Nevertheless, the reconcentration of income which occurred in Brazil over the 1960's is not surprising. Rural-urban migration of unskilled workers tends to keep wages of that group from rising rapidly. The supply of skilled workers is, in contrast, very inelastic even over the medium term, so that increases in demand result in sharply higher wages. The redistributional impact of this is reinforced by the concentration of ownership of capital and the high rates of return on capital associated with rapid growth.

27. The pattern of income distribution in Brazil in 1970 differed markedly from sector to sector. Income was much more equally distributed in the primary (largely agricultural) sector albeit in a much lower level. Not more than 20% of the rural sector had incomes above the minimum salary

while approximately 60 to 70% of the urban sector did. Of the poorest 40% of Brazil's population two-thirds live in rural areas. The more even income distribution in the agricultural sector than in the urban sector is probably a reflection of the effect of non-money incomes of subsistence farmers rather than more equal distribution of human or physical capital. Education is probably less important as a causal factor in income inequality within the agricultural sector than between the agricultural sector and the urban sector. Educational attainment in the rural sector is more evenly distributed but is generally lower than in urban areas. Physical capital in the form of land is distributed very unequally as according to the agricultural census of 1960, 44.8% of agricultural establishments were of less than 10 hectares (mean size was 4 hectares) and these accounted for 2.4% of land areas. Furthermore, land tenure information indicates that about 28% of all agricultural establishments and 46% of those smaller than 10 hectares were worked by tenants or sharecroppers.

Table 14: DISTRIBUTION OF INCOME BY SECTOR, 1970
(Percent of Total Income)

Percentile	Primary	Secondary	Tertiary	Total
Highest 1%	12.9	12.9	11.9	14.1
Highest 5%	26.6	31.0	31.9	34.1
Highest 10%	36.3	42.3	45.1	46.5
Lowest 40%	15.6	14.4	9.5	10.0
Lowest 10%	2.1	1.7	0.8	1.1
Mean (Cr$ per month)	138	360	387	281
Gini Coefficient	0.44	0.50	0.57	0.56

Source: Langoni, op. cit., pp. 26-30.

(Percentages)

	Participation in Labor Force (%) 1/			Participation in Income (%)			Mean Monthly Income 1960 Cr$		Mean Monthly Income Growth (%)	Gini	
	1960	1970	1970-60	1960	1970	1970-60	1960 3/	1970	1970-60	1960	1970
Sector											
Primary	46.6	40.0	-14.0	29.1	19.6	-32.6	121	138	14.0	0.43	0.44
Secondary	15.2	19.7	29.5	18.9	25.2	33.3	256	359	40.2	0.42	0.50
Tertiary	38.2	40.2	5.3	51.9	55.2	6.4	280	387	38.2	0.50	0.57
Urban 2/	53.4	60.0	12.2	70.8	80.4	13.5	273	378	38.5	0.48	0.55
Region 4/											
I	10.4	10.6	2.1	16.8	16.3	-3.0	334	448	34.1	0.45	0.53
II	20.9	22.8	9.2	28.6	34.4	20.4	283	426	50.5	0.44	0.54
III	14.7	16.8	13.9	16.2	16.1	-0.7	228	426	18.9	0.41	0.50
IV	16.0	13.5	-15.3	13.0	9.8	-24.5	169	205	21.3	0.53	0.55
V	30.7	27.6	-9.9	17.4	15.4	-11.5	117	157	34.2	0.49	0.55
VI	7.4	8.7	17.2	7.8	7.4	-5.4	216	238	10.2	0.44	0.49
Sex											
Masculine	8.3	79.5	-4.4	89.2	86.5	-2.9	221	306	38.5	0.49	0.57
Feminine	16.8	20.5	22.0	10.9	13.5	23.3	130	186	38.8	0.52	0.54
Education											
Illiterate	39.0	29.8	-23.8	21.1	11.8	-44.2	111	112	-	0.42	0.39
Primary	51.7	54.5	5.3	53.2	46.5	-12.6	211	240	13.7	0.42	0.46
Ginasio	5.2	8.0	55.6	11.1	13.7	24.2	440	482	9.5	0.44	0.51
Colegio	2.3	5.2	96.2	7.0	12.8	83.5	536	688	23.3	0.42	0.50
Higher	1.4	2.5	79.3	7.7	15.2	98.6	1,123	1,706			
TOTAL							206	282	36.9	0.50	0.57

1/ Includes only income recipients.
2/ Secondary plus tertiary.
3/ Adjusted to 1970 price -- for urban sector using GDP deflator, for rural sector price index of supply of agricultural goods.
4/ I - Guanabara, Rio; II - São Paulo; III - Paraná, Santa Catarina, Rio Grande do Sul; IV - Minas Gerais, Espírito Santo; V - Maranhão, Piauí, Ceará, Rio Grande do Norte, Pernambuco, Alagoas, Sergipe, Bahia, Paraíba; VI - Rondônia, Acre, Amazonas, Roraima, Pará, Amapá, Mato Grosso, Goiás, Distrito Federal.

Source: Carlos Langoni, [illegible] Desenvolvimento Econômico do Brasil (1973, Rio de Janeiro, Editora Expressão e Cultura.

Table 16: EDUCATIONAL ATTAINMENT OF INCOME EARNERS BY SECTOR, 1970
(Percent)

	Primary	Urban
Illiterate	53.3	14.0
Primary I (First 4 years)	45.6	60.4
Primary II (2nd years)	0.8	12.9
High School	0.2	8.6
Higher	0.1	4.1

Source: Langoni, op. cit.

28. The key question is whether the rapid growth which has taken place since 1967 has resulted in an improvement in income distribution, or at least in a reduction of the numbers of people living in absolute poverty. There has been a considerable improvement in the terms of trade for the agricultural sector since 1967, with the relative prices of agricultural products rising by 17% from 1967 to September 1973. This, in combination with a lower rate of growth in rural population, has resulted in per capita sectoral product for agriculture in current prices increasing more rapidly than that in the urban sector. If income distribution within the agricultural sector had remained unchanged, this would have implied an improvement in the overall income distribution. It is not clear, however, that this has been the case since much of the overall increase in agricultural prices has been due to increases in prices of export products (coffee, soybeans, cotton, sugar and beef) which are produced on relatively large agricultural establishments. At the other extreme, subsistence farmers without marketable output would not benefit at all from improvements in prices. There is evidence, however, of substantial improvements in agricultural wages after a sharp decline in 1967-70. It should be noted that the figures presented in Table 18 exclude the state of Sao Paulo where there has been a fairly severe decline in rural population and where, consequently, real rural wages may have increased even more than the approximately 17 to 24% indicated for the rest of the country during 1970-73. While available data are not sufficiently disaggregated to allow saying with confidence what the effect of developments in agricultural prices and wages on income distribution has been, it appears that distribution within the sector may have, in fact, worsened. However, the increase in relative mean level of agricultural incomes would tend to have a positive effect on the overall income distribution.

Table 17: PERCENTAGE OF LAND AREA AND AGRICULTURAL ESTABLISHMENTS BY SIZE, 1960

	Establishments	Land Area
Less than 10	44.8	2.4
10 - 100	44.7	19.0
100 - 1,000	9.4	34.4
1,000 -10,000	0.9	28.6
10,000 and More	0.1	15.6

Source: Agricultural Census of 1960.

Table 18: CHANGES IN REAL WAGES OF AGRICULTURAL LABOR IN 16 BRAZILIAN STATES /1

First Semester	Foreman	Tractor Operator	Permanent Labor	Day Labor
1967-70	1.3	-6.8	-8.5	-6.0
1970-73	17.3	19.2	24.4	23.4
1967-73	18.8	11.1	14.1	16.1

/1 Deflated by general price index for March of approximate year.

Source: Fundacao Getulio Vargas, Centro de Estudos Agricolas.

29. Distribution of income in the urban sector is more uneven than that in the rural sector and it is particularly uneven in the tertiary (services) sector. As in the case of income in the primary sector it is difficult to estimate to what degree the skewness is a function of the inequality of distribution of human or physical capital. The services sector is particularly heterogeneous, combining highly profitable and high wage commercial and financial institutions and public utilities and low productivity or casual employment in households and trade. Unfortunately, very little data is available about trends in employment and income in the services sector. However, data on wage adjustment policies of the Government give at least an indication of trends for the urban labor force covered by these policies. During the stabilization period 1964-67, guidelines for wage adjustments for unionized workers, to the extent implemented, would have resulted in increases in nominal wages lagging behind price increases, and declining real wages as seen in Table 19. In 1968 there was a shift in wage policy and the adjustment formula would have at least permitted gradually increasing real wages. Moreover, there is general agreement in Brazil that a certain amount of wage

drift has been occurring and that in some sectors, especially manufacturing and construction, wage increases have substantially exceeded guidelines in recent years. Wage and employment data for manufacturing industry over 1971-73 indicate that the tendency of the wage share of value added to decline, which resulted from the wage adjustment formula and the relatively slow increase in industrial employment, has been halted. Data from the monthly industrial survey for 1971-73 indicate that the industrial wage bill has been increasing at approximately the same rate as value added, as both employment and wage rates have increased rapidly over the past two years. However, it should be pointed out that manufacturing wage rates are relatively high, probably falling in the seventh or eighth deciles of urban income and the ninth on the overall income distribution so that increasing wages would not necessarily statistically improve the income distribution. More recent Government pronouncements on wage guidelines indicate that there will be an even further liberalization, as the policy is now to allow wage adjustments to reflect increases in productivity. There is some evidence that the overall picture of employment and real wages is improving, even for lower skill levels. Persistent shortages of rural labor are reported in southern states and there are now indications of a tightness in the markets for unskilled workers in Guanabara (Rio) and Sao Paulo. For example, wages of construction laborers in Sao Paulo in 1972 increased between 22 and 25% in nominal terms while the cost of living for the area increased by 18%, compared to between 18 and 20% in 1971 which provided virtually no increase in real wages. Interestingly, in 1972 wages of less skilled workers rose more rapidly than those of skilled workers.

Table 19: PRIVATE SECTOR WAGE GUIDELINES
(Annual Percent Changes)

	Average Wage Guidelines	Increase In General Price Level	Implicit Change In Real Wage
1966	28.8	37.9	-6.6
1967	21.3	28.4	-5.5
1968	23.7	24.2	0
1969	24.1	20.8	2.7
1970	23.9	19.8	3.4
1971	22.3	20.4	1.6
1972	21.4	17.0	3.1
1973 (January-August)	17.4	15.0	2.1

Source: Ministry of Labor, National Department for Wage Adjustment.

30. In summary, available evidence indicates that the sustained high rate of growth of the Brazilian economy has, at least since 1970, been resulting in increasing absorption of labor into the modern sector of the economy and in rising real wages. While evidence on the evolution of income distribution does not permit definitive judgments, it appears as though there may have been some recuperation of position of income recipients in the middle deciles, fourth through seventh, which experienced the slowest growth during the intercensal period. Nevertheless, there is little reason to believe that the real income levels of the illiterate or undereducated or of subsistence farmers who make up the bottom two or three deciles of income recipients which did not increase at all over 1960-70 have increased significantly and their share of total income has probably declined since 1967.

G. Progress of the Northeast Development Effort

31. Progress of the Brazilian economy in 1973 seems to have been well distributed regionally, with the regional product of the Northeast growing by an estimated 13% compared to 10.5% for the country as a whole. However, growth of the Northeast for the period 1967-72 at 6.4% per year or 3.9% in per capita terms, was not sufficiently high to narrow the disparity between its per capita income and that of the rest of the country. In 1969, the last year for which official regional product estimates are available, the Northeast's per capita income was 48% of the national average. The relatively slow growth of the region compared to the rest of Brazil was due almost entirely to the poor performance of the agricultural sector. Industrial growth, which reflected the effects of strong fiscal incentives, was almost up to the very high national average. The agricultural sector of the region continues to manifest the symptoms of a highly skewed pattern of land ownership, deficiencies of credit, extension and research facilities, low utilization of modern inputs and poor marketing facilities. In addition, agricultural output in the region remains highly vulnerable because of irregular rainfall patterns. Droughts have been responsible for absolute declines in agricultural output in 1970 (16.9%) and 1972 (2.4%). The reorganization of the Northeast development effort with the establishment of the National Integration Program (PIN), the Program of North/Northeast Land Redistribution (PROTERRA) and the Special Program for the Valley of the Sao Francisco River (PROVALE) was due in part to recognition by the Government that the main solution to agricultural underemployment and poverty lies principally in accelerated development of the agricultural sector itself rather than in the growth of the industrial sector of the area. Fifty percent of the funds generated by fiscal incentives under the Article 34/18 program have been preempted for PIN, PROTERRA and PROVALE for 1972-76 to finance agricultural development and related infrastructure with the intention of expanding the agricultural frontier and raising the productivity of low-income agriculture. In addition, several new programs have been introduced recently to supplement the Northeast development effort during 1973-74. These include:

(a) Special Programs for the Support of Basic Industry, which will make approximately Cr$ 860 million (in 1973 prices) available over 1973-74 to supplement 34/18 resources which have been preempted for agricultural purposes;

(b) The Fund for the Development of Integrated Programs, which will provide Cr$ 320 million largely in budgetary funds during 1973-74, for the development of integrated "package" projects in agriculture, industry and urban development;

(c) The Program of Support for Infrastructure in Large Urban Centers, which would provide longer term financing in the 1973-74 period from the National Housing Bank (BNH) and Bank of the Northeast (BNB) for urban services in rapidly growing cities of the Northeast; and

(d) The Special Program for the Assistance of the States of Piaui, Maranhao and Ceara, which will result in infrastructure investment of approximately Cr$ 1,000 million to stimulate the development of a regional growth pole in an area which includes three of the poorest states.

TABLE 20: BRAZIL AND THE NORTHEAST, COMPARATIVE GROWTH RATES, 1967-72

	Northeast	Brazil
NDP at Factor Cost	6.4	9.9
Agriculture	0.1	5.6
Industry	11.7	12.5
Services	7.3	9.9
Population (1960-70)	2.4	2.9
Per Capita Product	3.9	6.8

Source: SUDENE and Mission estimates.

32. These programs will supplement the already large ongoing programs involving fiscal transfers to state governments, fiscal incentives through the 34/18 scheme, support from official credit institutions and investment in infrastructure and direct its productive activities by the federal Government, its autarkies and directly productive activities by the federal Governance is estimated by the Government to amount to more than Cr$ 20 billion, or US$3.2 billion, over 1973-74.

Government Efforts to Spread the Benefits of Economic Growth

33. The Brazilian Government is convinced that the poverty and dualism which afflict the country can be ameliorated only if high rates of economic growth are sustained, permitting absorption of the economically marginal population into the modern sector of the economy. Within a policy context designed to sustain rapid economic growth the Government has initiated a

Table 21: NORTHEAST DEVELOPMENT EFFORT, FEDERAL RESOURCES APPROPRIATED, 1973-74

(million 1973 Cr$)

	1973	1974	Total
I. Special Programs: PIN, PROTERRA AND PROVALE	1,020	1,100	2,120
II. Transfers	2,150	2,350	4,500
State Participation Fund	(600)	(630)	(1,230)
Municipal Participation Fund	(530)	(550)	(1,080)
Special Fund	(270)	(350)	(620)
Earmarked Funds	(750)	(820)	(1,570)
III. Fiscal Incentives (34/18)	960	1,060	2,020
IV. Federal Public Investment in Priority Projects	2,360	2,590	4,950
V. Financial Support of Official Banks for Fixed Investment	1,850	1,850	3,700
Subtotal	8,340	8,950	17,290
VI. New Programs			
BNDE Support for Basic Industry	310	550	860
Fund for Development of Integrated Programs	80	240	320
Program of Support for Urban Infrastructure	170	230	400
Special Support for Piaui, Maranhao and Ceara	...	...	690
Sugar Industry Nationalization	...	...	900
National Sanitation Plan (Northeast)	130	120	150
PROGRES (urban expansion program)	32	48	80
			20,790

Source: IPLAN/IPEA.

large number of programs whose stated goals are alleviating poverty, facilitating access to employment in the modern sector and to a lesser extent, redistributing income. These programs fall into two broad categories, regional development programs and social development programs. The regional programs include:

(a) PIN - The National Integration Program, whose activities and investments are largely, but not exclusively, in the Amazon;

(b) PROTERRA - a program generally focussed on land redistribution and agro-industrial development in the North and Northeast;

(c) PRODOESTE - a development program for the Center-West;

(d) PROVALE - a special program for the Valley of the Sao Francisco River; and

(e) The special program for the states of Ceara, Maranhao and Piaui, the poorest states in the country.

The social development programs include those in the fields of education, housing, water and sewerage, health, as well as two schemes designed to provide a source of savings for workers.

H. Regional Development Programs

34. The Program of National Integration, PIN, has as its major goal integration of the Amazon into the national economy, largely by improving its transport links with the Northeast and the Center-West. The development of the Amazon has been initiated for a mixture of psychological, political and economic motives. Psychologically, the conquest of the Amazon represents Brazil's coming of age as a nation and a fulfillment of national destiny. Politically, Brazil hopes to solidify its national sovereignty over an immense, sparsely populated area and to secure its frontiers. Settlement of the area may also serve to relax internal pressures resulting from the landless state of much of the northeastern peasantry by providing an alternative to migration to the already crowded cities of that region. Economically, it is anticipated that Amazon development will eventually make a significant contribution to total national agricultural production, result in discovery of new mineral resources and, to the extent poor agriculturalists develop lands of their own or receive employment from others, alleviate poverty and perhaps even result in an improved distribution of income. The principal instrument that the Government is using to open the Amazon is road construction. Four major roads are planned or are under construction, the widely publicized, east-west Transamazon Highway, near completion; the east-west perimetral highway roughly following Brazil's northern border; and two north-south roads, Belem-Brasilia and Cuiaba-Santarem. Transport infrastructure accounted for 65% of PIN expenditures during 1971-72, and construction of the northern perimeter highway will continue to preempt a large share of PIN resources for the foreseeable future.

Table 22: PIN - EXECUTION OF FINANCIAL PROGRAM, 1971-73
(million current Cr$)

	Programmed			Actual		Percent of Total
	1971	1972	1973	1971	1972	1971-72
Transport	545	337	406	388	453	64.5
Roads	(520)	(300)	(341)	(363)	(417)	(59.8)
Other	(25)	(36)	(65)	(25)	(36)	(4.7)
Colonization	30	150	140	30	118	11.3
Irrigation /1	71	134	170	65	139	15.6
Health	29	15	40	(-)	26	2.0
Exploration	22	15	17	22	15	2.8
Other	15	59	101	14	35	3.8
Total /2	712	709	874	518	786	100.0

/1 Largely Northeast.
/2 Excludes transfers to PROTERRA and PROVALE.

Source: IPLAN

35. Amazonian development is still at a very early stage and the modest expenditure on settlement to some extent reflects this. The strategy for opening the region combines elements of exploration (radar mapping and geological survey), preventive medicine, protection of indigenous peoples, agricultural research and ecological studies. The Government's policy on colonization and land settlement is not well developed and the opening up of new agricultural lands in Brazil has historically been carried out without the benefit of carefully planned infrastructure inputs or structured official settlement schemes. The Government seems to feel that this will also be the pattern in the Amazon, where the greatest potential for agriculture lies in the combined development of pasturelands for cattle and forest industries, both requiring heavy capital inputs. The major development will probably, therefore, be carried out on a commercial scale. At the same time, the Government is committed to providing for poorer farmers who are spontaneously moving to the Amazon in search of a better life and is trying to develop low-cost, administratively simple settlement models. However, there are a few who believe that this will be the dominant form of settlement in the region. Thus, directed colonization schemes along new Amazon highways are likely to continue proceeding at a slow pace as the Government is not convinced that this is either a solution to northeastern poverty or an economic form of settlement. However, regardless of the form of settlement that emerges, the Government should be better prepared to provide titles and technical assistance to settlers.

36. The objectives of the PROTERRA Program, which only began to get underway in 1972, are to promote greater access of farmers to land, increase employment and promote agro-industry in the north and northeast. While PROTERRA's land reform goals are ambitious (the 1972-74 Development Plan calls for about a quarter of million hectares to be distributed during the period) virtually no distribution has yet taken place. The lack of progress is a result of insufficient political commitment to land reform, administrative fragmentation of responsibility for the program and lack of sufficient research and extension activity.

Table 23: PROTERRA: ALLOCATION OF FUNDS, 1972

	Value (Million Current Cr$)	Distribution (Percent)
Agricultural Credit	450	53
Agricultural Infrastructure	250	30
Research and Extension	80	10
Land Reform	60	7
Total	840	100

Source: IPLAN.

37. The PRODOESTE scheme was instituted at the end of 1971 to promote development of the states of Mato Grosso and Goias through construction of roads, agricultural storage facilities, slaughterhouses and rural sanitary works. In 1972, Cr$ 190 million was spent on the program of which Cr$ 160 million was devoted to roads. PROVALE was created in mid-1972 to accelerate the settlement of unoccupied land and promote the development of the Valley of the Sao Francisco River which will be affected by the planned construction of the Sobradinho dam. As in the other regional programs, the first stages largely involve infrastructure investments; in the case of PROVALE, basic highways and service roads, dredging of the river, improvement of irrigation systems and relocation of villages.

Table 24: PROVALE: EXECUTION OF FINANCIAL PROGRAM, 1972-73
(Million Cr$)

	Programmed 1972	Programmed 1973	Actual 1972	Percent of Total 1972
Transport	175	197	140	79.1
Roads	(150)	(170)	(125)	(70.6)
Other	(25)	(27)	(15)	(8.5)
Irrigation	8)		8	4.5
Sanitation	15)	30	15	8.5
Other Infrastructure	14)		12	6.8
Colonization	2	20	2	1.1
Agricultural Credit	45	60	-	-
Total	260	307	177	

Source: IPEA/IPLAN.

38. In 1973 the Government decided to institute a special program to assist the states of Ceara, Maranhao and Piaui, the three poorest Northeastern states. The Northeast industrial development strategy has resulted in a concentration of economic activity around the cities of Salvador (Bahia) and Recife (Pernambuco) and the principal goal of the new program is to stimulate the development of a third industrial growth pole around the city of Fortaleza (Ceara). This would be done largely through transport infrastructure linking Fortaleza with the Transamazon highway and development of agricultural infrastructure and production in the three states to feed agro-industrial development.

39. These regional programs are designed to bring about a fuller utilization of the country's land and resources in order to provide a means for the alleviation of poverty and underemployment, which are particularly pressing in the Northeast. On the whole, they contain relatively little new, being strongly oriented to infrastructure, especially transport. They are at a relatively early stage of implementation and it is evident that their impact on northeastern poverty will be largely indirect and relatively slow in coming. The aspects of the programs which would have the greatest potential short-run impact on rural poverty, i.e., land reform, colonization and integrated rural development, have made little progress. While the Government has not ignored research, extension, rural education, health and nutrition programs, the Northeast effort seems strongly unbalanced with a disproportionate emphasis on infrastructure and underemphasis in these important

complementary areas. The imbalance of the program reflects on the one hand the Government's willingness to devote substantial amounts of resources to the Northeast and, on the other, the limited technical and administrative capacity for carrying out the non-infrastructure components of regional development programs.

40. A federal interministerial council has been established with representatives of the Ministries of Finance, Planning, Agriculture and Interior to establish priorities for development in the Northeast and assemble data necessary for preparation of studies. In addition, certain state governments in the region, notably that of Rio Grande do Norte have been becoming increasingly active in preparation of rural development programs. Close cooperation is required to assure that federal and state efforts are in harmony. An appropriate division of labor would be for federal authorities to prepare a general strategic framework for the Northeast region while local authorities, who are more familiar with specific regional problems and who, in many cases will be more directly involved in implementation and financing of specific programs, carry out more detailed tactical planning.

I. Social Integration Programs

41. The Brazilian Government has instituted a series of social programs designed to alleviate the effects of poverty, broaden the distribution of the benefits of economic growth, and improve access of the marginal population to employment in the modern sector. Aware of the strong correlation between educational attainment and income levels, the Government has given very high priority to expansion and reform of the educational system. Public expenditure on education has, in fact, risen from 1.8% of GDP in 1964 to 3.4% in 1972 and the First National Development Plan calls for an increase to 4.5% by 1974. The enrollment rate has increased from less than 70% of population aged 5-14 in 1968 to 76.5% in 1972 and should approach the Government's target of 80% by 1974. Despite the educational reform of 1971 which created an eight-year basic education cycle and reformed the curriculum, the efficiency of the school system still suffers from high rates of repetition and drop-out associated with rigid examination requirements, insufficient school materials and underprepared and poorly remunerated teachers. Efforts to reform curricula and adopt them to local conditions are still underway and special emphasis is being given to upgrading the quality of the teacher corps. Two special programs, the National Book Program and the National Foundation for Educational Material, have recently been established to broaden access of school children to educational materials. Especially high priority is being given to reduction of illiteracy in the 15-35 year age group through the national literary campaign, MOBRAL, which has as its target reduction of the number of illiterates in this age group from 7.5 million in 1971 to 2 million in 1974 through a program of special five month courses. From the second semester of 1970 to the end of 1972, 3.5 million people completed this program (1.3 million people in the northeastern states completed these courses in 1972 alone).

Table 25: INCREASE IN SCHOOL ENROLLMENTS, 1968-73

Level	Enrollment (Thousands) 1968	1973	Increase (Percent) 1968-73
Primary	14,348	19,939	40.0
Secondary	801	1,483	85.1
Higher	278	836	200.1

Source: Ministry of Education.

42. A new program for the provision of housing to low-income families in urban areas was established in early 1973. Called PLANHAP (The National Plan for Popular Housing), this program will be administered by the National Housing Bank (BNH) and will provide financing for housing of families with monthly incomes ranging from one to three minimum wages. The goal of the program is construction of two million housing units by 1980 to be financed jointly by the BNH and state and municipal governments. The BNH will finance a larger proportion of the program and at lower interest rates in the poorer states. The interest rates to the beneficiaries of the program will range from 1 to 6% (plus monetary correction) depending on their income level. PLANHAP will concentrate on providing housing in the larger and faster growing cities of the country and will result in construction expenditures on the order of Cr$ 30 billion over 1973-80, of which the BNH will finance 80% and state and local governments 20%. This program will not, however, reach the very poorest elements of Brazil's urban population as, for instance, an urban wage earner in Sao Paulo with an income equivalent to the minimum wage would, in 1970, have been in the upper half of Brazil's income earners. The Government feels, however, that this is the lowest income level for which it is practical to consider relatively conventional housing finance. Generally, urban workers with income levels below the minimum wage are not fully employed and are not able to service debts regularly. In order to reach these groups a program of urban sites and services is under preliminary consideration. Under such a program states and municipalities would sell urban land to low-income families on which they would construct their own dwellings with extention of urban services, land purchase and construction materials financed by the BNH. Such programs have already been carried out in satellite cities of Brasilia such as Ceilandia.

43. In 1970 only about 55% of Brazil's urban population was served by a general water supply system and only 30% by sewerage systems. In the face of a rapidly growing urban population, the Government has decided to make a strong effort to increase the coverage of urban sanitary services to 80% for water and 50% for sewerage by 1974. The BNH has been given charge of this program, called PLANASA, which will be carried out on a state-by-state basis jointly financed by the BNH and state governments. The proportion of financing provided by the BNH for each state's program will be a function of

its per capita income level and interest rates charged by the BNH will vary inversely with the wealth of the state. Each state will be required to adopt a uniform progressive water rate structure system which provides higher unit rates to consumers as water consumption increases. The system is designed so that wealthier state systems help finance those in poorer states as the interest rates charged by BNH on loans to the state systems vary according to their per capita income levels and, because of the progressive rate structure, wealthier consumers, at least to the extent that water use varies directly with income, support provision of services to poorer consumers.

44. The BNH financing for both PLANAP and PLANASA (as well as for all other BNH programs) is possible by virtue of its management of the resources of the large (Cr$ 17.8 billion in mid-1973) and rapidly increasing Tenure Guarantee Fund, which was created in 1966 as a variety of unemployment insurance. It is based on an 8% payroll tax, the proceeds of which are deposited in accounts in the BNH owned by individual workers and withdrawable if they become unemployed or upon their retirement or death or for finance of housing. These payroll taxes are, at best, not progressive and, therefore, these programs financed from the proceeds of those taxes do not involve a significant redistribution of income. On the other hand, the financing of these programs will provide for a significant increase in the assets of a relatively modest class of society instead of financing further acquisition of assets by the wealthy.

45. The Government is trying to spread the effect of and access to public health programs more broadly by intensifying its efforts to control transmissible diseases, giving special emphasis to eliminating smallpox, malaria and yellow fever and controlling schistosomiasis and Chagas disease. In addition, a National Program of Basic Medicine was established in 1971 to promote production and distribution of basic medicines to low-income families. This is being done by making use of publicly owned production facilities and by signing agreements with private producers to purchase output of their excess capacity at reduced prices for distribution in poorer regions of the country. In 1972 the National Institution of Food and Nutrition (INAN) was established to develop programs for improving the nutritional levels of low-income families. Finally, through the Program of Assistance to Rural Labor (PRORURAL), established in 1971, an effort is being made to incorporate rural workers into the nationwide system of medical assistance and social benefits provided to urban workers through the National Institute of Social Welfare (INPS). It should be pointed out that responsibility for the provision of health services is badly fragmented and there is a definite need for overall coordination and planning of the activities by the multiplicity of entities active in the field.

46. Two programs were begun in 1970 with the stated aim of assuring workers a greater stake in and share of the growth of the Brazilian economy. These are the Social Integration Program (PIS) and the Program for the Formation of Patrimony of Public Employees (PASEP). Under the PIS scheme employers are required to contribute a percentage of their gross sales (starting at 0.15% in 1971 and rising to 0.5% in 1974) and of their income tax liabilities (starting at 2% in 1971 and rising to 5% by 1974) into a fund administered by the Federal Savings Bank (CEF). The proceeds of the fund are credited to the accounts of individual workers, in relation to their salary and length of service, who may withdraw them on occasion of their marriage, disability or for purchase of housing. These funds, which draw interest at 3% per year plus full monetary correction, are lent out by PIS/CEF largely through investment banks for private (industrial) investment. By the end of 1974, 11 million workers will be participating in the PIS scheme and the fund's liabilities to workers will exceed Cr$ 5 billion.

47. PASEP is a similar fund financed by contributions of public institutions including federal and local governments, autarkies, public enterprises and mixed enterprises. PASEP is administered by the Bank of Brazil, which lends the funds to both the public and private sector. In mid-1973 there were about three million participants in the PASEP scheme and the value of the fund exceeded Cr$ 2.3 billion.

48. The graduated rise in PIS contribution rates was designed to offset a gradual reduction in state value added tax (ICM) rates which took place over the same period. In a sense, then both PIS and PASEP represent a surrender of fiscal resources to the workers for formation of patrimony. The redistributional aspects of such a mechanism are very difficult to assess as it essentially requires making a judgment about the impact of the entire fiscal system. It is, however, clear that the two schemes are generating substantial amounts of saving as the increase in deposits of participants during 1973 will exceed one percent of GDP.

Table 26: OPERATIONS OF PIS AND PASEP
(Million current Cr$)

	December 1971	December 1972	June 1973
PASEP			
Liabilities	292	1,354	2,307
Deposits of Participants	292	1,354	2,307
Assets	292	1,354	2,307
Loans to Public Sector	14	167	250
Loans to Private Sector (and Other Assets)	278	1,187	2,057
PIS			
Liabilities	296	1,628	2,572
Deposits of Participants	279	1,294	2,198
Other Liabilities	17	334	374
Assets	296	1,628	2,572
Loans	125	1,125	1,751
Other Assets	171	503	821

Source: Central Bank.

J. Conclusion

49. The multiplicity of programs and the large volume of resources being devoted to the alleviation of poverty in Brazil are evidence of the deep concern of the Government about this problem. That these programs are generally not reaching the poorest segments of society is largely a reflection of the difficulty involved in designing and carrying out programs for attacking the deep rooted and complex syndrome of rural poverty on a broad scale. The Government has not been convinced, either by its own experience or by that of other less developed countries, that governmental programs which are aimed directly at alleviating rural poverty such as colonization, land reform and integrated rural development, can be successfully applied on a large scale. It is devoting its primary efforts instead to sustaining high rates of economic growth in the hope of increasing the rate of absorption of marginal population into the modern sector. While it has been argued that in other countries growth of the modern sector has not been able to absorb the marginal population and significantly reduce underemployment, there have been very few instances where balance of payments constraints have been overcome sufficiently to permit sustaining growth rates in the 10% range for a

substantial length of time. There is evidence that rapid growth is at least beginning to have a strong positive effect on employment in Brazil. The Government believes further, that rapid growth is a prerequisite for the generation of fiscal resources which enable it to engage in extensive programs designed to relieve inequality of opportunity in context where opportunity itself is expanding rapidly.

50. There are, however, measures which can be taken within the context of the Brazilian development strategy which would have a positive impact. The absorption of labor into industry has undoubtedly been impeded by the practice of using payroll taxes to fund various programs. By 1971 these taxes amounted to almost 44% of payrolls. The funding of these programs could be shifted to other taxes which do not provide a disincentive to employment of labor. A viable alternative might be to increase to value added taxes on some consumer durables and luxury goods. This would, in addition, probably add on element of progressivity to the tax structure. The practices of granting industrial fiscal incentives (for export industries or for regional considerations) which subsidize the use of capital, and trying to promote agricultural production through subsidization of interest rates, do not encourage labor absorption.

51. The lack of balance in rural development programs in the Northeast, with a relative overemphasis on infrastructure and underemphasis of research and extension have been pointed to above. The discussion has also pointed to the desirability of extending programs in education, health, sanitation and nutrition to lower income families. Given the high correlation between poverty and lack of education and the extent of illiteracy in rural areas, special priority should be given to extending and strengthening the system of rural education. It seems, however, that there is a substantial bottleneck in the carrying out of all of these programs. It is not the shortage of funds, for the Brazilian fiscal system seems capable of generating resources sufficient to carry out a massive effort. It is rather, the scarcity of technical and managerial staff for design and implementation of programs. The sine qua non of stronger effort in social development field is the upgrading and expanding training of the technicians (agriculturalists, public health specialists, teachers, etc.) for carrying out the programs and the implementation of a public sector remuneration scheme which will encourage entry into these fields and enable the government to retain its trained personnel in a career service.

II. AGRICULTURAL DEVELOPMENT PROSPECTS AND ISSUES

52. After a period in Brazil's development when the primary emphasis has been on industrialization, the Government now seems to be giving more attention to the need for modernization of agricultural production and marketing and expansion of the frontier of cultivation. Brazil has the potential for sustaining relatively high long-term growth in agriculture, i.e., 6 to 7% per year. It is one of the few countries in the world that still has available abundant land on which continued expansion of output can be based, so that reasonably high sectoral growth is possible without significant improvements in agricultural technology. In addition, large increases in productivity can be achieved with the use of modern techniques and improved inputs. Government policies and programs are producing considerable progress both in expanding land under cultivation and increasing productivity of activities for domestic and external markets. While the Government is concerned about disparities in incomes and living conditions within the agricultural sector, improving the regional distribution of growth and the distribution of income in the sector is proving to be considerably more difficult. Although poverty is not an inherent characteristic of agriculture *per se*, Brazil's most backward regions (i.e., the Northeast) are predominantly agricultural and, however serious urban poverty problems may be, most low-income families live in rural areas. Some Government programs (land reform and colonization) and policies (subsidized credit) have redistributive elements. However, their impact has been modest in terms of their extent and their ultimate beneficiaries. Raising productivity of the low-income rural population will be the major challenge facing the Brazilian authorities in the next decade. Meeting this challenge will require a considerable amount of determination, resources and ingenuity.

53. The contribution of the agricultural sector to the overall growth of Brazil has been fundamental since the colonial days and several agricultural products have been successively major generators of growth of the economy. The exploitation of the Brazil-wood or red-wood in the 15th and 16th centuries, of sugarcane in the 16th and 17th centuries, of cotton, tobacco and livestock in the 18th century, of rubber in the 19th century and of coffee in the present time, have provided the export earnings which have made possible the settlement and industrialization of Brazil. In spite of having been relatively neglected by policy makers, the agricultural sector has managed to grow at a rate of about 4.5% per year over the last 20 years. Inflation, price controls, erratic government intervention in marketing of products, overvalued exchange rates and export controls, tended to distort prices particularly in the early 1960's, discouraging agricultural production and exports. Overall changes in economic management taking place in the mid-1960's, while not specifically directed to stimulate agriculture, contributed to eliminate some of these distortions and improve incentives for farmers.

54. Recent growth has tended to be higher, although there have been fluctuations due to climatic factors. Overall, Brazilian agriculture has grown at an average of 6.5% over the last five crop years while rural population has been increasing by less than 1% per year (Table 7.1). Had it not been for unfavorable weather conditions affecting various important crops (coffee, wheat, cotton and beans), agricultural growth would have been higher.

A. Growth of Production of Major Agricultural Commodities

55. Coffee is the most important agricultural product in terms of value of production and accounts for about one-fourth of total export earnings. Three agricultural commodities, coffee, soybeans and sugar, generate 40% of total export earnings, and unprocessed or semi-processed agricultural exports account for some two-thirds of the total value of exports. On the other hand, over 60% of agricultural output goes to the domestic market, and, in terms of area of production and employment, foodcrops -- notably corn, beans and rice -- are far more important than export crops. The rapid growth in population, per capita incomes and urbanization are generating a rapid increase in domestic demand, threatening to reduce or eliminate exportable surpluses particularly in high-income elasticity products such as beef and cotton.

Products Mainly for Export

56. Coffee. Brazil is the largest exporter of coffee in the world although its share of the world market has declined from 50% in the early 1950's to less than one-third at present. During the last 50 years Brazil has undergone two distinct coffee cycles in which production grew consistently to a peak during which large volumes of stocks were accumulated. These were followed by declines in output and sharp drawdowns in stocks. During the first cycle, which ended in 1944, there was a general southwestward movement of coffee cultivation into the better lands of the interior of Sao Paulo and the northern border region of Parana. During the later cycle, movement in this direction intensified so that by the early 1960's much of the interior of Parana was under coffee cultivation. This area, while presenting excellent soil conditions for coffee growing, was exposed to periodic frosts which damaged the trees and caused production to fluctuate widely. Thus, with the exception of the record coffee harvest of 1965-66 (37.7 million bags) during the last 10 years production has been consistently below requirements for domestic consumption and exports, leading to the gradual depletion of stocks. 1/ This deterioration of Brazil's productive capacity culminated with the severe frost of 1969, which reduced the 1970 crop to 11 million bags, followed by further frost damage in mid-1972,

---

1/ The "normal" production in an average year is now 20-22 million bags, compared to total requirements of about 26 million bags (domestic consumption of 8 million bags and exports of 18 million bags).

curtailing 1973 production to less than 15 million bags. The Government, through the Brazilian Coffee Institute (IBC), reacted to this with an attempt to rebuild productive capacity, initiating a new cycle in coffee production. First, the IBC improved production incentives by transferring a large proportion of international price increases to growers by raising the minimum export price, reducing the contribution quota (export tax) on the minimum export price, and discontinuing subsidized sales out of stocks to domestic roasters in order to stimulate the domestic sale and price of coffees which were below export quality. In addition to the substantial incentives provided by this increase in relative coffee prices, in 1972 the IBC launched a Cr$4.3 billion coffee expansion program designed to promote the planting of 600 million trees over three years and to improve the productivity of existing trees, setting up credit lines for the renovation of old plantations and for the purchase and application of fertilizers and pesticides, under strong technical assistance and supervision from IBC technicians.

57. The response of coffee growers has been so favorable that the full planting program will be completed in two years instead of three and will add as much as 12 million bags to the present 20-22 million bag capacity of existing plantations over the next five years. Several factors will conspire, however, against the full achievement of this expansion in production. In addition to the likely but unpredictable frosts which introduce a high risk element to plantations in the state of Parana, production costs of coffee have risen rapidly, 1/ exposing coffee to increased competition from other crops. Even at present high coffee prices, plantations in the less productive frost-prone areas have been torn out and substituted by mechanized production of oil seeds. In Sao Paulo, for example, at present prices and operational costs plantations producing at the national average yield (9.2 bags per 1,000 trees) would be less profitable than practically any other crop, with the exception of sugarcane or non-mechanized corn and rice. Under these circumstances, it is unlikely that further expansion in areas planted with coffee in northern Parana or in the main agricultural areas of Sao Paulo will take place. The best coffee lands are already planted with coffee and the trend would be to replace coffee with more profitable crops such as soybeans, castor beans or cotton, or even cattle, in areas of lower fertility or which are more exposed to frosts. There is, of course, considerable scope for increased productivity in present coffee plantations. Most of the expansion in production, however, is likely to come from new areas in the west of Sao Paulo and Minas Gerais, the southeast of Mato Grosso and even the south of Goias.

1/ The growing scarcity of labor and the rapidly rising wages have had a strong impact on production costs of coffee, which is difficult to mechanize and requires a large amount of labor for harvesting and on-farm processing. In addition, the emergence of coffee rust since 1970 is requiring increasing and costly applications of fungicides to prevent a drop in production. Finally, substantial amounts of chemical fertilizers are being required to compensate for the loss in fertility of coffee lands after repeated years of cultivation.

58. Allowing for some reduction in production potential as a result of incidence of frosts, coffee rust and substitution by more profitable crops in marginal areas, the expected average production capacity is likely to reach some 32 million bags by the end of the 1970's. Assuming that Brazil attempts to maintain its present share of world coffee exports (increasing exports at about 2% per year) stocks would continue declining to a minimum of 13.7 million bags in 1976 and increase thereafter as production gradually builds up (Table 7.15). Even assuming that present high coffee prices reduce per capita consumption, in the short run Brazil will have to resort to occasional imports of Robusta coffee to meet domestic demand while allocating the better quality coffee it produces to satisfy its export commitments.

59. Sugar. Brazil's production of sugar has been growing continuously, with particularly large increases taking place in 1972 and 1973. With the recent declines in Cuban production, Brazil is now the largest producer of sugar in the world. The bulk of the 6.0 million tons of centrifuged sugar produced in 1972 comes from the states of Sao Paulo, Rio de Janeiro and Minas Gerais in the Southeast Region (51.6% of the area and 64.8% of the harvest) and the Northeastern states of Pernambuco, Alagoas and Bahia (26.5% of the area and 26.8% of the harvest). Most of the increases in cane production have been due to expansion in harvested areas, with practically no increases in average yields. 1/ Yields are low and, even in those areas which presently have the highest average yields, like Sao Paulo, sugarcane production is among the less profitable alternatives (see Table 7.28). The scope for increases in productivity is, however, considerable. It is estimated that in Sao Paulo, with adequate technical practices and use of fertilizers, yields could be increased at least by 50%. This is even more so in the sugar producing areas of the Northeast, where yields are presently much lower (cane yield per hectare is only 47 tons in Pernambuco and 59 tons in Sao Paulo, compared with 155 tons in Peru and 240 tons in Hawaii). In the Northeast, the poor fertility of the soils, exhausted after centuries of monoculture, the hilly terrain which makes cane cultivation and harvesting difficult, and the dispersion of sugar fields from the mills, account for higher production costs and lower yields than in the rest of the country. In addition, social problems generated by monoculture and concentration of land ownership complicate efforts to increase efficiency and productivity. In 1971 the Ministry of Industry and Commerce adopted a program to bring Northeast sugar productivity up to the level presently being achieved in the south of the country. The main features of this program are: the creation of credit lines to merge and reequip sugar mills and to integrate and reallocate cane production and milling; the adoption of a uniform sugar price throughout the country,

---

1/ Brazil has much land with flat topography and adequate weather conditions to considerably expand the area cultivated with sugar. Even with relatively modest levels of technology, there is no immediate constraint in the amount of sugarcane that could be produced in Brazil. The basic limitation is the availability of markets in which to sell the increased output.

fixed at the level corresponding to southern production costs; the establishment of a gradually declining subsidy to be eliminated over a six-year period, to compensate for the presently higher production cost of the Northeast; and the allocation of PROTERRA funds to finance the reemployment of cane and mill workers displaced by productivity improvements. It has been estimated that, with the introduction of modern techniques and improving the organization of the sugar industry, it would be feasible to maintain the same level of production with at least a 30% reduction in land over a ten-year period. This would imply, however, that about 180,000 hectares with low sugarcane productivity would have to be diverted to other crops, and productive employment would have to be found for some 115,000 cane field workers displaced by such a program. This poses an extremely difficult problem since, in addition to the scarcity of employment opportunities for unskilled labor in other sectors, there appear to be no other productive alternatives for the low-quality land released from sugarcane that would provide sufficient income to raise these workers above the subsistence level.

60. While domestic sugar consumption, requiring on the average between two-thirds and three-fourths of total production, has been expanding rapidly, the large increases in production in 1972 and 1973 were made possible by overall world consumption exceeding world production and, particularly, by Cuba's inability to supply the socialist countries. Brazil has taken advantage of this situation and of the high prices in the free market for sugar, to expand its exports to markets other than the U.S. from some 600,000 metric tons in 1971 to 2,000,000 tons in 1972 and 1973, mainly as a result of large shipments to Mainland China and the Soviet Union. For handling these increased exports, Brazil inaugurated in 1972 a bulk sugar terminal in Recife with the capacity for storing 200,000 tons of bulk raw sugar and mechanically loading more than 1,000 tons per hour, as well as two underground tanks for molasses with the capacity for storing 10,000 m^3. In addition, plans are being made for the construction of a second terminal in the port of Maceio (Alagoas) and also for the building of a bulk warehouse system high up in the plateau area of Sao Paulo, with connections to the port of Santos, where handling and unloading facilities would be built.

61. While Brazil has been remarkably successful in developing its sugar export markets, in the next few years a major main determinant of growth in sugar production is likely to be the growth of the domestic market resulting from a larger population, increased incomes, and substitution of centrifuged sugar for brown sugar. The Government is aiming at a target of 12 million tons of production by the end of the decade, one-half of which would be exported. Brazil, however, might find difficulties in securing additional external markets for its increased production, particularly since overproduction might push prices down again making exports of sugar unprofitable unless sold in preferential markets. Taking this into consideration, a target of production of between 8 and 9 million tons of sugar by the end of the decade would still increase Brazil's share in world production and exports, and would seem more likely to be achieved.

62. Soybeans. Production of soybeans has increased from 750,000 tons in 1967-68 to 5 million tons for the 1972-73 harvest and an expected 7.5 million tons for 1973-74. This has made Brazil the third largest producer of soybeans in the world, behind the United States and the People's Republic of China, which together account for almost four-fifths of world production. This vast expansion of soybean production has taken place mainly in the states of Sao Paulo, Parana and Rio Grande do Sul, and has been instrumental in restructuring southern Brazilian agriculture. Yields have been improving consistently as farmers have gained experience with the crop. Several factors have permitted and encouraged this rapid expansion: (a) soybeans are rotated with wheat and use the same machinery and harvesters as wheat and rice; (b) the crop is highly mechanized, an important factor in Parana and Sao Paulo, where rural labor is becoming scarce; and (c) international prices have been extraordinarily favorable, fueled by strong international demand, rising from an average of US$117 per ton in 1970 to US$260 per ton in April 1973.

63. Up to now, most of the soybean expansion has come from double-cropping of wheat areas and the cultivation of natural pastures. Most of the Southeast and Southern Regions (from the south of Goias and Mato Grosso to Rio Grande do Sul) present favorable conditions and sufficient land availability for further expansion of soybean cultivation. Thus, the overall balance of agricultural production need not be disrupted by soybean expansion, provided that adequate relative price relationships are maintained. Some substitution might take place in the less profitable sugarcane plantations, and in marginal or frost-prone coffee plantations.

64. All evidence indicates that soybean expansion is likely to continue, with the 1973-74 harvest exceeding 7.5 million tons. Domestic consumption of soybeans has increased rapidly due to a fall-off in domestic peanut oil production, and because of some increase in the feeding of soybean concentrates to livestock. In view of the strong export demand, in 1973 the Government had to resort to export curbs and price controls to assure supplies to the domestic market and prevent sharp increases in domestic soybean prices. Domestic consumption of soybean oil and meal is likely to accelerate as the use of meal and cake for livestock and poultry feed continues to increase. In addition, external demand is likely to continue strong as Japan diversifies its purchases of soybean outside of the United States and increased utilization of soybean cake and meal is made by livestock producers in western Europe and elsewhere. The major short-term bottleneck to expansion is likely to be shortage of transport and of storage and export handling infrastructure. The Government has engaged on an ambitious program of Export Corridors to expand inland storage facilities, bulk railroad transportation and port storage and handling equipment in the major ports of the Southeast and Southern Regions, in which the main element is soybean exports. While this program is expected to eliminate infrastructure bottlenecks by 1976, in the short run some deficits of transport and storage facilities are likely to occur. In addition, during this process of adjustment the Government will have to carefully manage the relative prices of soybeans and wheat, rice and corn, to prevent short-falls in domestic requirements of these products. Assuming that internal demand for oil increases at 5% annual and that domestic utilization of cake and meal grows at 10% per year after 1973, Brazil could

export over 8 million tons per year out of an overall soybean production of some 11 million tons by 1980.

65. Cacao. Although Brazil is the third most important producer of cacao products, its share of world export market has declined from about 18% in the 1950's to less than 13% in the early 1970's, because of increased production in Western Africa. By the mid-1960's over 90% of Brazil's cacao trees were more than 40 years old, badly spaced and of low productive capacity. Cultivation and harvesting methods were still primitive, and fermentation and drying techniques were inadequate, resulting in a product of poor quality whose marketing was complicated by inadequate storage on the farm and bad road links to consuming and exporting centers. In 1965 the Government decided to reactivate the Executive Commission for the Recuperation of Cacao Plantations (CEPLAC), which had originally been set up as a credit institution, in order to stimulate production and export of cacao, modernize methods of production and increase profitability of farms. With substantial financial resources from the Ministry of Finance and with the proceeds of an export levy of 10% on beans and 5% on butter, CEPLAC organized an integrated program to simultaneously develop agronomic research, extension, credit, supply of modern inputs, training of labor force, and provision of infrastructure in order to improve the productivity, quality and competitive position of Brazilian cacao production. Largely as a result of the work of CEPLAC, yields have increased over 25% in the last six years, and the use of fertilizers, pesticides and the replanting with new varieties have expanded even more rapidly. CEPLAC's target is to replace 65% of trees of more than 40 years of age, in order to double the volume of production in the Bahia area by 1985 (Bahia presently accounts for 95% of the Brazilian production of cacao). These targets would call for cumulative increases in production of the order of 4.5% per year. While from the production side it is quite possible that CEPLAC can achieve these increases in productivity, from the demand point of view, in a market dominated by few buyers and in which, in the case of Brazil, the United States alone accounts for 55% of Brazilian exports (and has declined to enter into the recently approved International Cacao Agreement), such a rapid expansion of production might be risky. Production surpluses cannot be stored in the form of cacao beans for more than six months, and overproduction would result in lower prices and product losses. Assuming that in the medium run there will not be significant increases in the area under cultivation, a long-term increase in output of the order of 3.5% (3.0% productivity, 0.5% area) would increase output by over 60% by 1985.

Production Mainly for Domestic Consumption

66. Beef. While beef has generally been viewed as a product with a substantial export potential, with exports in 1972 valued at over 5% of total exports, it may prove to be a case of a high income elasticity product in a large and rapidly growing economy, where the unrestricted growth of domestic demand tends to outstrip exportable surpluses. Cattle raising is a traditional

Brazilian activity of extensive character which is carried out throughout the country but is more concentrated in the southeast, center-west and southern regions. The size of the cattle herd is uncertain, with estimates ranging from a low of 76 million head in the 1970 Agricultural Census, to 98 million by the Ministry of Agriculture. Recent estimates by the National Council for Development of Livestock (CONDEPE) working from cattle population of previous censuses and the official statistics on slaughter, put the cattle herd at some 85 million head in 1970. A large part of the cow herd is milked to produce dairy products. Most beef is produced extensively on natural pastures which, during the dry period in the center-west, and the winter in the southeast and the south, suffer considerable reductions in their carrying capacity.

Table 27: DOMESTIC RELATIVE PRICES FOR BEEF, 1970-73

Year	General Price Index /1	Index of Prices Received by Farmers for Steer for Beef /2	Index of Relative Prices for Beef	Annual Increase (%)
1970	100	100	100	
1971	120	140	117	17.0
1972	141	178	126	7.7
1973 /3	162	239	148	17.5

/1 Index 2 of the Fundacao Getulio Vargas, with 1970 = 100.
/2 Index 265 of the Fundacao Getulio Vargas, with 1970 = 100.
/3 Estimated on the basis of August Actuals.

67. The low take off rate (about 11% of the cattle population) is a function of (a) low fertility, ranging between 55 and 60%; (b) high calf mortality of about 10%; (c) extended maturation period of 4 to 4.5 years; and (d) inefficiencies in milk production tying up an excessive share of the herd in that industry. These, in turn, are the result of extensive exploitation at low technological level, poor pastures and deficient sanitary conditions of the animals. Despite these negative factors, the potential for expansion of the herd and beef production is substantial. New areas being brought into production in the north of Parana and south of Mato Grosso and, more recently, in the south of Para and the northeast of Mato Grosso, permit significant expansion of livestock activities, albeit still of an extensive character. Existing areas in the state of Rio Grande do Sul, the Pantanal of Mato Grosso, the southeast region of Goias, the north and northeast of Minas Gerais, and the southwest of Bahia are experiencing improvements in technical practices and the quality of their pastures and are becoming intensive fattening centers. Credit lines funded by the IBRD and IDB and managed by CONDEPE are financing investment in herd management facilities and improved pastures, aiming at an improvement in the productivity of the beef cattle herd. While this is generally a slow and difficult process, it is likely to be stimulated by the substantial

increase in producer's prices that has taken place since 1970. Prices received by farmers for beef cattle have more than doubled in the last three years in current terms, and have expanded by almost 50% in real terms, with particularly large increases in 1973.

68. While this large increase in prices in part reflects the worldwide increase in beef demand and prices, in Brazil the main impact has come from the extraordinary increases in domestic demand derived from the sustained increase in per capita incomes and population, and the relatively high income elasticity of demand for beef. The sharp increase in beef prices has led to strong investment in herd building which has restricted supplies available for consumption or export. In spite of the Government price stabilization efforts which led the authorities to limit exports in 1973 and established a quota system to assure supplies for the domestic market and contain domestic price increases, the pressure of demand for export and domestic consumption ultimately forced relaxation of controls on beef prices. These increases did not seem to restrain domestic demand which, concurrently with the low supply of the inter-harvest period and the closing of some packing houses that did not meet the export sanitary requirements, rapidly exhausted exportable surpluses and as domestic prices paid to producers approached international price levels, led the authorities to import meat by the end of 1973.

69. In spite of the opening up of new areas to livestock exploitation, and an intensification of cattle raising on improved pastures complemented with concentrated feed, it is unlikely that at present growth rates of personal disposable income production of beef could expand fast enough to catch up with domestic demand, even at present high prices, and still leave important exportable surpluses. 1/ Assuming feasible improvements in reproduction rates, and declines in the maturation period and the mortality rates, a maximum long-term rate of increase in overall beef production of between 4 and 4.5% per year could be achieved (see Table 7.23). At present price levels and likely growth in per capita personal disposable income and population, domestic demand for beef could increase at over 6% per year through 1980. It is possible that there may be cyclical increases in production during which exports are feasible but long run export prospects are questionable. High beef prices are already encouraging the consumption and production of substitutes, namely poultry and pork. Under more favorable relative price conditions, there appear to be substantial possibilities for expanding production, particularly of poultry, in the very short run and without requiring substantial additional infrastructure. In any event, at present rates of growth of income and urbanization in Brazil, it is unlikely that a high income elasticity commodity such as beef could become a major export product.

1/ The original Government goal was to increase Brazil's exportable beef surplus from about 150,000 tons in 1971 to about 500,000 tons carcass weight by the middle of this decade. This target was subsequently scaled down to some 300,000 tons by the end of the decade and recently (end 1973) a maximum ceiling of 80,000 tons per year during the next three years (1974-76) has been imposed.

70. Cotton. As in the case of beef, production of cotton has been unable to keep up with the growth of domestic demand, leading to a reduction in exportable surpluses and a declining share in total exports. Two-thirds of the national output of cotton is produced in the southeast and south, from short staple annual varieties. Considerable research and extension effort in these regions has resulted in widespread use of certified seed, fertilizers and insecticides and rapid improvement in yield and fiber quality. The crop, however, is rainfed and is therefore susceptible to climatic variations which have considerable influence on yields. In the northeast, 70% of cotton is of a perennial type, mainly long staple, genetically unimproved, and frequently interplanted. It rarely receives fertilizer or insecticides and has low yields and fiber of variable quality. Average yields are about 270 kg of seed cotton per hectare compared to 1,000-1,300 kg in the south.

71. The growing trend of cotton production in southern Brazil was brought to a halt by unfavorable weather conditions in the last three years which discouraged producers and turned them to the more profitable production of soybeans, particularly in the states of Sao Paulo, Parana and Goias. The increasing scarcity of labor force for cotton picking and the very large increases in agricultural wages that have taken place in these states have made cotton less competitive relative to products such as soybeans and beef fattening which require less labor and are facing a stronger demand and higher prices. Some farmers in these states are moving into mechanized cotton harvesting (10% of last year's harvest was collected by mechanical means) but this is likely to be profitable only in the most fertile and better managed plantations.

72. The Northeast region is taking advantage of high cotton prices and of its comparative advantage in availability of labor force, and is expanding production rapidly. The Institute for the Development of Cotton and Oilseed (INFAOL), with financial support from the federal and state governments and the private sector, is conducting with encouraging results an intensive program of experimentation and extension on new varieties and cultivation practices for cotton in the Northeast.

73. On the demand side, consumption of cotton by domestic industries has expanded very rapidly in the last few years as a result of fiscal incentives and Government promotion of exports of processed cotton. Consumption of cotton by textile industries in Brazil grew at less than one percent per year in the period 1963-69, while in 1970-72 their use of cotton accelerated to an annual rate of 5.6% per year. The presently high world prices of cotton and cotton products and the fiscal incentives are likely to considerably increase the demand for cotton by the domestic industry for the export market. In view of this situation, the Government in 1973 temporarily suspended cotton exports in order to secure supply for the domestic industry.

74. Under these circumstances, and even assuming that any reduction of production in Sao Paulo and Parana would be compensated by expansion in Minas Gerais, Goias and Mato Grosso, and that production of long staple cotton in the Northeast expands sufficiently to meet the fast increase in domestic demand, exportable surpluses of unprocessed cotton are, at best, likely to

remain at present levels. If the Government plans for modernization and support of textile industries improves the efficiency and expands further the processing capacity of domestic industry, exportable surpluses of cotton are likely to disappear altogether. Of course, they could be partially compensated by exports of cotton fabrics and garments.

75. Wheat. Commercial wheat production began in Brazil in the 1940's when production extended from small subsistence plots in the highlands into large scale market-oriented farms in former grasslands. Production expanded from less than 100,000 tons in 1940 to some 1,100,000 tons in 1955 mainly in the states of Rio Grande do Sul, Santa Catarina and Parana. Although the lands cultivated with wheat were of relatively low quality, the incentives of guaranteed prices considerably higher than world prices, together with the availability of special credit programs to provide working capital and the purchase of machinery and inputs at subsidized interest rates, were instrumental factors in this first expansion of wheat. Then, following a series of years of unfavorable climate and increasing incidence of pests and diseases, production declined to less than 300,000 tons in 1966. The recovery of wheat production took place only after 1968 when the Government, in an effort to reduce the growing drain of foreign exchange by wheat imports, resumed its vigorous support of wheat production by allocating increased financial resources and setting up profitable guaranteed prices for domestic production. An additional factor in the expansion of wheat was the increased market opportunities and farmers awareness of the economic advantages of planting soybeans in association with wheat. Thus, the expansion of wheat since 1967 follows closely the parallel expansion of soybean production. The same machinery used for cultivating and harvesting wheat can be used in the cultivation and harvesting of soybeans. In addition, there has been some improvement in wheat varieties combining higher resistance to diseases and to unfavorable weather with improved yields. The expansion of wheat reached its peak in 1971 when marketed production covered 56% of domestic consumption, and would have continued to increase had it not been for adverse climatic conditions which reduced production in 1972 to less than one-third of the expected volume. Production recovered again in 1973, but not fully, because of the bad experience of the previous year and a relatively low domestic price for wheat as compared to the considerably higher profitability of soybean and beef production.

76. In spite of the relatively high use of credit (about 60 to 70% of the total area and production are receiving some sort of financing), the high applications of fertilizers and the extensive use of machinery (about 70% of the total area covered with wheat is mechanized), and the very fast increase in the use of certified seeds (at present about three-fourth of the total area planted is with certified seeds), average yields have not improved as production expanded, reflecting the unfavorable ecological environment in which wheat is produced in Brazil. While there is no doubt that in the wake of the rapid expansion of soybean plantings further growth of wheat production in those lands is likely to take place (but now with wheat as the secondary crop), the lack of progress in developing wheat varieties suited to the marginal ecological conditions of Brazil make wheat production risky and susceptible to weather and disease damage. The Government target of producing

internally one-half of the domestic demand appears reasonable since the increasing profitability of other agricultural activities in those lands would considerably increase the real cost of subsidizing domestic wheat production under unfavorable ecological conditions in order to achieve selfsufficiency.

77. Corn. Covering over 10.5 million hectares (about 40% of the total land in crops) corn is grown in all states, normally in upland areas as a rainfed single crop, with yields ranging from 850 kg per hectare in the northeast to some 1,500 kg per hectare in the south. Growth in output at a rate barely exceeding population growth has been achieved largely through expansion of area cropped with a low technological input. Average yields have increased only slightly, and land and labor still account for 80% of the total production cost. Only about 50% of the total production of corn is marketed, with the rest being retained on the farms and used principally as animal feed. In poor agricultural areas, corn is also used directly as an important element in human consumption. Since most of the demand is for animal feed (about 70% of marketed production is fed as grain to pigs and an additional 10% is used in compound rations, mainly for poultry), demand for corn is highly dependent on increased production of beef substitutes. The demand for corn for feed for the poultry and pig industries is likely to be very strong as a result of the substantial increases in beef prices and the improved competitive position of these beef substitutes.

78. Higher support prices fixed by the Government in an attempt to arrest a decline in supply of corn, coupled with some decline in international price of soybeans and a strong demand of corn for animal feed, have resulted in larger number of producers continuing and expanding production of corn in 1973. Overall supply will, however, at best meet the rapidly expanding demand, leaving very little, if anything, for export. While there is substantial scope for improving yields of corn, because of the wide dispersion of production, strong Government effort will be required to supply improved seeds and fertilizers and increase technical assistance and financial support in a scale sufficiently large to have an impact in overall output. Under these circumstances, and in view of the prospects of a continued strong domestic demand, it is unlikely that Brazil will develop significant exportable surpluses. Corn is an important element of the Government's Export Corridors Program and some exports could take place from areas supported by this program as a result of trade agreements with Japan.

79. Rice. Together with beans and manioc, rice is the major element of the diet of low income people in Brazil and is cultivated throughout the country. About 70% of the area is planted with upland non-irrigated varieties, without fertilizer and with poor husbandry practices producing widely varying yields. Production has increased very slowly while yields have stagnated. Rice is a preferred crop in newly incorporated land, where it is generally cultivated in sequence two or three years and as yields decline sharply it is replaced by extensive livestock exploitation, with producers moving into new previously unexploited areas. This nomadic aspect of rice production in central states is reflected in a lack of interest in technical improvements and in low average yields. In addition, in the southern

states which have traditionally supplied the main consumer centers, areas planted with rice have been under considerable pressure from competing crops such as soybeans and cotton.

80. Brazilian production barely meets domestic requirements and, after some years of poor crops, rice stocks have been practically depleted. Rice exports, which in 1971 reached almost 150,000 tons, dropped to less than 2,000 tons in 1972 and were prohibited in 1973 in order to ensure supplies for the domestic market and to build carry-over stocks. These stocks are necessary to moderate the large variations in production generated by the vulnerability of upland rice to unfavorable weather conditions. There is considerable scope for increases in rice production through both expansion in planted area as well as improvement in productivity. Yields can be increased considerably by greater intensity of cropping in established areas and by heavier use of fertilizer and other inputs such as herbicides. While presently high world prices of rice could generate incentives for higher production, considerable research work in the development of better varieties adapted to Brazilian conditions, as well as substantial technical and financial assistance to producers would be required. This is likely to be a slow process.

81. Beans. With about four million hectares in beans and a crop of three million tons, all for the domestic market, Brazil is the world's largest producer and consumer of beans. Production has increased very slowly (less than 2% per year) due entirely to expanded plantings. Beans are cultivated in association with other crops, especially corn, generally with primitive cultivation practices. Since beans are a typically small farmer crop planted as the lower priority product in association with others and with very limited use of machinery, they have not suffered from the expansion of soybeans in the southern states. The major obstacles to expanding bean production are the fragmentation of production, very poor technological practices, large number of varieties of low productivity and the vulnerability of output to climatic conditions. The continuous decline in per capita availability of beans has led to an overall scarcity of this product. The good prospects for 1972 were frustrated by a drop in production in the state of Parana, due to adverse climatic factors. In addition, there was a decline of production in Bahia, generating additional pressure on southern production to supply the Northeast. In the coffee producing areas the need to chemically control coffee rust has also had a negative effect on bean production, traditionally inter-planted with coffee trees.

82. Due to the drop in expected supply and the exhaustion of stocks, prices increased rapidly, more than doubling between late 1972 and mid-1973. The currently high prices are likely to bring some increase in area planted for the next harvest, but actual production will depend on the occurrence of favorable climatic conditions. In addition, due to the high climatic risk and low levels of productivity, together with the substantial proportion of output that is consumed on the farm (it is the major source of protein for low income farmers), bean production seems to be relatively inelastic to changes in prices. In the long run, Brazil could aim at meeting increases in domestic demand and building a reasonable level of stocks to compensate for the variability of production. Significant increases in yields are unlikely, since commercial and more technically oriented producers find more profitable alternatives.

B. Agricultural Development Issues and Policies

Development Strategy

83. The Government attaches considerable importance to rapid expansion of agricultural output. With industrial capacity currently almost fully utilized, it will be difficult to achieve sustained overall high levels of economic growth without an acceleration of agricultural growth to about 6-7% per year. The relative abundance of productive factors (land and labor) in the rural sector would permit this expansion of GDP with a lower investment rate than would be possible with heavier reliance on industry. Also, the extent to which agricultural production meets the increases in domestic demand is crucial for the achievement of the Government's price stabilization objectives. 1/ In addition, agriculture is and will continue for some time to be a key generator of foreign exchange: of the estimated 6 billion of exports for 1973, at least two-thirds will directly or indirectly originate in the agricultural sector. Finally, with almost 50% of the population engaged in agricultural activities, a more balanced and equitable development process could not be achieved without comparatively higher increases in agricultural production and productivity than experienced in recent years.

84. To support the longer term growth objective for agriculture, the Government has allocated substantial public resources to programs to incorporate new areas to agricultural production (PIN, PROTERRA, PROVALE, PRODOESTE). The goal of these programs is to expand agricultural area by 4 to 5% per year, and to encourage settlement to bring these areas into production as quickly as possible.

85. A second component of the Government strategy is to increase productivity and production options through a modernization of agricultural research and increase in domestic production of improved seeds, and substantial expansion in the supply of credit (and complementary technical assistance) at subsidized interest rates for the purchase of modern agricultural inputs. These inputs should bring about a 2% increase per year in productivity necessary to achieve the overall long-term growth target for agricultural output. The Government feels, probably rightly so, that in the medium run the greatest impact in productivity and in overall agricultural output can be achieved concentrating its action in the already most favorably endowed and more productive areas and farmers. Thus, most of these programs and policies are aimed at the larger and most responsive commercial producers who are in a better position to make use of modern technology and generate marketable surpluses for domestic consumption and exports. While some of these programs have components that could improve productivity of the poorer farmers, these components (credit, colonization and land reform, research and extension) have not been given high priority for government action, and the results to date have been disappointing.

1/ Assuming a 5% increase in per capita personal disposal income and an overall income elasticity of demand for foodstuffs of 0.5 and 2.7% per year population increase, agriculture would have to grow at an average of 6% in real terms per year in order to avoid price increases or further imports.

Expansion of Cultivated Area

86. The most important tool for expanding agricultural area is the National Integration Program (PIN). Created in June 1970, it has as objectives: (a) promoting the integration of the North and Northeast regions through the construction of the Transamazon and the Cuiaba-Santarem roads and a connecting system of secondary roads; (b) implanting an official colonization program in the Amazon; and (c) developing irrigated agriculture in the Northeast. In 1972, construction of the northern perimetrical highway and the extension of the Cuiaba-Santarem highway to the frontier with Surinam were added to the PIN program. While work in the Transamazon proceeded as scheduled, the colonization program with the settling of 3,200 families in 1972, fell considerably short of the target of 6,000 families established for that year, and the irrigation program is just beginning to get out of the planning stage. PROTERRA is mainly a subsidized credit program for areas already under cultivation, but it could also be used in conjunction with colonization programs in new areas (i.e., the transition zone into the Amazon of Piaui and Maranhao).

Increased Productivity

87. Several programs have been launched to stimulate the adoption of modern technology. In the Northeast Region, the most important one is PROTERRA whose objectives are: the redistribution of land, financing the expropriation of land for reasons of social interest, and the provision of credit for land purchases by small and medium farms; the support of research, extension and assistance to cooperatives and colonization; the promotion and financing of agro-industry and marketing infrastructure, and subsidized financing of the use of modern inputs. By far the greatest impact to date of PROTERRA has been in the area of rural credit. The Banco do Brasil incorporated into PROTERRA some credit programs already in existence which were compatible with PROTERRA objectives. The main financial agencies of PROTERRA are the Bank of Brazil (providing about 80% of the loans), the Bank of Northeast (with some 15% of the loans) and the Bank of the Amazon, and their joint activity generated an expansion of agricultural credit from Cr$500 million to over Cr$1,200 million between 1971 and 1972, mainly for the financing of farm investment and the purchases of fertilizers, pesticides, improved seeds, and technical assistance. The greatest emphasis in increasing productivity has, however, been given to the more productive agriculture of the Southeast and Southern Regions. In 1972, in spite of the substantial increase experienced in agricultural credit in the Northeast, the regional distribution of credit ranged from one credit per 1.7 farms in the Southeast Region to one credit per 11 farms in the Northeast and one credit per 15 farms in the North.

88. Several special funds to finance agricultural investments and the purchase of inputs, administered by the Central Bank (FUNDEPE, FUNDAG, FUNFERTIL, PROTERRA), were expanded by almost 50% in nominal terms between 1971 and 1972, and the value of agricultural loans of the Bank of Brazil and the commercial banks grew by over 40% in the same period. The availability of these substantial amounts of credit at subsidized interest rates was reflected in a

large expansion in the use of fertilizer and in the purchase of farm machinery (notably tractors). Technical assistance is expanding as a complement of the credit programs. The Technical Assistance Agency (ABCAR) set up 123 new field offices in 1972 and now has a total of 1,493 offices covering 60% of the municipalities of the country. The Government decided to reorganize the institutional arrangements for agricultural research by creating a Public Enterprise for Agricultural Research (EMBRAPA), related to the Ministry of Agriculture and linked to other federal organizations such as the IBC, the IAA, CEPLAC, the regional superintendencies, universities, State Secretaries of Agriculture, and the private sector. EMBRAPA plans to consolidate the multiplicity of experiment stations and research centers currently pursuing uncoordinated and inadequately funded research programs and to reorient research towards a few priority areas, integrate the work of research with that of the Extension Service, and make research more interdisciplinary and economically oriented to produce practical results in a relatively short period of time. The Government is executing a program to increase production of improved seeds for wheat, potatoes, cotton, rice, corn, soybeans, peanuts and beans in the Southeastern and Southern states with IDB financing. A second stage is programmed for the Northeast in association with SUDENE.

89. A Cr$3.5 billion program of agricultural infrastructure improvements is being implemented in the Southeast and Southern Regions to increase the flow of bulk and processed products from the areas of influence of the major ports of the regions (Vitoria, Santos, Paranagua and Rio Grande). Known as the Export Corridors Program, its goal is a significant improvement in the competitiveness of agricultural exports. About 37% of the funds would be invested in improvement of railway transport facilities, an additional 33% would be invested in port improvements and port loading facilities, and some 23% would be spent in agro-industry, mainly cold storage facilities and oilseed processing. Minor expenditures are contemplated for the financing of intermediate storage facilities (inland collection points for bulk cargo accumulation) and for modern equipment and inputs. Almost 80% of financing is expected from external sources, mainly from consortia of Japanese banks and suppliers. The program's goal is to triple the flow of soybeans from one million tons to over 3 million tons between 1972 and 1976, double the flow of soymeal and expand substantially exports of corn and sorghum and double beef exports. While improved infrastrucuture will reduce the prices at which Brazilian agricultural products can be exported, it is less clear that the magnitude of production which these investments are designed to accommodate will be forthcoming. Expansion of these crops (corn, soybeans and sorghum) will require, in addition to the incorporation of new land into production, substantial amounts of fertilizers, lime and other agricultural chemicals, which are also required by programs to expand coffee and wheat production. Achieving a large exportable surplus of corn would be particularly difficult because of the need for feed rations for the domestic meat industry. In turn, the rapid increase in domestic demand for beef is likely to outstrip the possibilities for beef exports through the Corridors program. While there may be competition for the same type of agricultural land among the various crops that the Government is trying to encourage, the availability of underutilized land is sufficient to permit the joint expansion of all

these activities. Relative prices among these commodities, however, will determine the allocation of lands which are more fertile and closer to market areas.

90. In addition to the investment and financial programs already mentioned, the Government has instituted a number of economic incentives to stimulate agricultural production, such as: minimum prices 1/; exemption of agricultural inputs from the value added tax, and of tractors from the tax on manufactured goods (both exemptions reduced by 18% the final price of tractors and equipment); almost total exoneration from income tax for rural producers for a period of 10 years; income tax credits to corporations to invest in afforestation and in agricultural and livestock enterprises; and subsidized interest rates for financing inputs. These actions are undoubtedly going to have an impact, albeit gradual, on agricultural productivity, and the government target of increasing overall productivity in agriculture by 2% per year in the long run seems feasible, although it will require considerably greater improvements in already established areas to compensate for the lower yields of new lands brought into production.

C. Distributive Implications of Agricultural Growth

91. Of the main functional agricultural programs currently being pursued by the Government (research, extension, marketing infrastructure, colonization, credit, production of fertilizers and improved seeds, etc.), only credit and land reform and colonization have had among their explicit objectives that of reaching small farmers. In practice, results have been short of expectations.

Agricultural Credit

92. Since 1965, with the creation of the National System of Rural Credit, 2/ the Government has made a continuous effort to increase the amount of loanable funds for agriculture. Agricultural credit as a percentage of net agricultural domestic product has increased from about 26% in 1966 to over 50% in 1972. The share of agricultural credit has fluctuated at about 25% of total credit, while agricultural product as a percentage of overall product has declined from over 20% in 1965 to less than 16% in 1972 (see Table 7.31). Available evidence seems to indicate that, particularly in the last

---

1/ Minimum prices are important in the relative allocation of credit among crops, since production credits to farmers are granted as a proportion of the expected harvest valued at the minimum price set for that particular crop.

2/ The National System of Rural Credit is composed of the Central Bank, which implements guidelines set by the National Monetary Council, and rules the whole system, and of the Bank of Brazil, Bank of the Amazon, Bank of Northeast, and National Bank of Cooperative Credit. This is linked to the action of INCRA, of the state official banks, of private banks, and of rural credit cooperatives.

two or three years, there has not been, on the aggregate, a shortage of credit for agriculture. This appears to be true for all geographic regions of Brazil. While no specific measures were taken to ensure a greater availability of credit to smaller farmers, it was hoped that, because of the substantial overall increase in credit, a significant proportion would trickle down to the smaller farmers. Agricultural loans were made cheaper than loans to other sectors, and smaller loans were assigned even lower interest rates to stimulate small farmers to apply for financing. Apparently, however, very little of the increase in agricultural credit has gone to small farmers, and informal sources of credit (such as landowners or transportation and storage intermediaries) still provide a significant proportion of their financial needs, particularly in low-income areas or areas with a high proportion of tenant farmers. In a recent survey of cotton farmers in the interior of Ceara, the Ministry of Agriculture found that only one out of sixty sharecroppers had received institutional credit, but almost all had one or more informal loans obtained from farm owners or local merchants. Most of these credits were not used for improved inputs but to finance consumption purchases until the harvesting period.

93. Historically, the Bank of Brazil (BB) has been the major supplier of agricultural credit and, with its network of over 600 branch offices dispersed throughout the country, in many areas it is the only accessible source of institutional financing. The National Bank for Cooperative Credit (BNCC) was created in 1961, to directly attack the problem of small holder access to credit but remained inactive until reorganized in 1966. However, the BNCC has had limited access to funds and has experienced an erosion of its capital due to the highly subsidized interest rates. In the Northeast Region, with the largest concentration of small, poor farmers, the Bank of the Northeast (BNB) has become an increasingly important source of credit. In addition, SUDENE has administered a small proportion of tax incentive funds going into agriculture, mainly for large livestock ranches. Still, the biggest source of financing in the Northeast is the Bank of Brazil, with a network of over 200 agencies in the region. In general, BB provides about two-thirds of total agricultural financing in the Northeast, while the BNB supplies less than 20%. With only 70 branch offices, the BNB has tended to reduce the number of its loans for agriculture, compensating this with an increase in the average size of each loan. To some extent this can be explained by BNB's policy of lending mainly for a package of fixed investment and to a recent attempt to reach small farmers by lending through cooperatives instead of to individuals. Nevertheless, the BNB appears to be more concerned with the profitability of its operations than with the development of small-scale regional agriculture. Conversely, the BB has, in the last few years, made a serious attempt to reach smaller farmers, increasing significantly the number of small loans (see Tables 7.32 and 7.33). In 1971 the average size of production loans by the BB was about one-third that of the BNB (US$ 1,100 equivalent compared to US$ 3,000).

94. The tendency to discriminate against small farmers in agricultural credit has been illustrated by a number of studies. It is not clear to what extent small farmers lack incentives to use credit (unfamiliarity with bank procedures, insufficient number of bank branches in rural areas, insecurity of tenure and high production risks, or lack of profitable uses for credit), or the banking system lacks incentive to lend to small farmers and thus tends to reduce to a minimum their small loan portfolio when faced with substantial demand on the part of larger and more creditworthy customers. These studies indicate that there would be a significant additional demand for credit on the part of small and medium-size farmers if they had access to technological packages capable of significantly raising productivity and incomes. The fact that at present an important part of the credit to small farmers finances family consumption from one harvest to the next, underlines the absence of a high-return technological package. A fundamental component of this package would have to be improved varieties of crops already known to small farmers -- i.e., traditional subsistence crops, such as corn and beans -- which would have a substantially higher response to fertilizer and pesticides than the present native varieties. This would have to be supported by an efficient and sufficiently dense extension and demonstration service and the physical inputs should be conveniently accessible to the farmer. Small farmers are unwilling to assume the risks of changing their traditional technologies or incurring debt unless the marginal increases in output permit noticeable improvements in their standard of living. Unless there is an improved production package to be delivered through financing, credit programs are not likely to increase productivity significantly in small-scale agriculture.

95. On the other hand, there are disincentives for financial institutions to lend to small farmers. Both the existing rural credit legislation establishing maximum nominal rates of interest, which in most cases correspond to negative real rates, as well as the natural desire of banks to reduce costs and minimize risks, would encourage them to allocate the available financing to the most creditworthy farmers. The use of interest rates and credit policy as a major means of subsidizing agriculture and influencing resource allocation, while serving to offset the high costs of agricultural inputs, benefits only those farmers receiving loans through official sources, particularly those who can provide adequate security. This system tends to encourage these farmers to overborrow, i.e., to seek loans for relatively low-yielding purposes to enable them to divert their own resources to other non-agricultural purposes or to undertake capital-intensive projects. Since, with very few exceptions, commercial banks are not adequately staffed with technical personnel, project appraisal is generally restricted to evaluation of commercial risk, disregarding those wider implications on resources allocation.

96. It seems clear that some incentives would have to be provided to banks and other lending institutions to compensate for the increased cost involved in processing a large number of small loans. Larger spreads in relending rates for smaller credits, simplified processing of loans, a higher proportion of loans channelled through cooperatives, and appropriate support

from the extension service to supervise the loans would go a long way in stimulating lending institutions to reach a larger number of farmers. Even these elements would not be sufficient to make a credit program effective unless credit forms part of an integrated package providing all the elements required for efficient production and for improvement of the living conditions of the rural poor, including modifications of regressive land tenure systems, improvement of marketing conditions, better education for small farmers and, in general, an integration of the small farmer into the overall economy.

97. It has been argued that low interest rates are required in agriculture to stimulate loan demand on the part of small farmers. It is generally believed that farmers have high elasticities of credit demand with respect to interest rates. However, while low rates may encourage credit use, they also adversely affect the banks' willingness to lend. In the case of Brazil, because of the portfolio quotas which require that a certain percentage of lending go to agriculture, some banks are forced to lend to agriculture, but at concessional interest rates they face an almost unlimited demand from large borrowers with excellent credit ratings. Those farmers well connected to the banking system would tend to over-use credit, introducing misallocation of resources and leading to the use of capital-intensive technologies. Several studies have shown that some reallocation of credit from large agricultural users to some small- and medium-size farms in Brazil would have a positive impact in output and would help to better achieve employment and income distribution objectives. 1/ The gradual slowdown in the rate of inflation and the elimination of the most serious distortions in the price structure would permit the Government to move to a system of indexing which would provide realistic positive interest rates for agricultural operations. These might discourage some larger farmers from over-intensive use of credit leaving additional funds for lending to medium and smaller farmers. Even at unsubsidized interest rates, the cost of institutional credit to small farmers is likely to be considerably lower than the implicit cost of non-institutional or informal borrowing. In addition, banks would have added incentive to seek smaller potential customers and to establish procedures for handling their requests in a more simplified and economic way.

98. The Government has recently established an insurance scheme or fund to cover debts of farmers when affected by natural disasters. This Insurance Program for Agricultural and Livestock Activities (PROAGRO) would go a long way in reducing risk of credit operations both to lenders and to borrowers. Combined with appropriate adjustments in interest rates and a more expeditious small loan administration, this system would encourage the development of rural capital markets to channel a significant amount of credit to be productively absorbed by small- and medium-size farmers.

Agrarian Reform and Colonization

99. In spite of the existence of a law and numerous dispositions enabling Brazilian agencies dealing with land reform to carry out in-depth modifications

---

1/ R. Meyer, D.W. Adams, N. Rask and P.F. Cidade de Araujo: "Rural Capital Markets and Small Farmers in Brazil, 1960-72." Columbus, Ohio, January 1973.

in the agrarian structure of Brazil, to date the achievements in this area can only be considered as a preliminary experience in setting up a few pilot projects, incorporating a small number of families and covering relatively limited areas. The cost per family and per hectare, both in capital as well as in technical personnel, has been relatively high, and implementation of the projects has been considerably slower than originally envisaged.

100. The greatest distortions in land tenure and land ownership exist in the Northeast Region where the predominant pattern of land tenure is the large privately owned estate tilled by sharecroppers and/or hired labor. While this system permitted the opening up of frontier areas in Bahia and Maranhao and the profitable cultivation of plantation type cash crops such as sugarcane, cocoa and cotton, it disregarded the development of food crops which continue being produced in small subsistence plots with primitive techniques and low yields. It also prevented the majority of northeastern farmers from obtaining security of tenure and sufficient incomes to escape from poverty and malnutrition. The Zona da Mata is the area that presents the greatest social problems because of the combination of a high concentration of population and the plantation agriculture based on sugarcane. The production possibilities for other crops other than sugarcane in this area are not very good, as its poor topography, high rainfall, heat and humidity, are not appropriate for the production of corn, beans or sub-tropical crops.

101. The National Institute for Colonization and Agrarian Reform (INCRA) launched a program in 1972 to redistribute parts to be detached from large farms of over 1,000 hectares in the Zona da Mata. It identified 1,827 farms of over 1,000 hectares in the states of Ceara, Pernambuco and Paraiba, covering a total area of 1.9 million hectares. According to various percentages established by law, these farms were required to liberate some 750,000 hectares to be sold, under PROTERRA financing, for redistribution. The landowners were required to submit a project to INCRA, specifying the areas to be sold, the proposed size of the plots, the prospective purchasers and the crops to be cultivated by the new farmers. While collaborating farmers were to be paid almost the full value of their land in cash, landowners who failed to submit proposals within the prescribed deadlines were subject to expropriation, with payment in long-term, non-indexed bonds.

102. No land redistribution has yet been carried out under this program. When, in 1973, after some postponements of the deadlines and assurances that the expropriation clause would not be enforced, landowners submitted projects relating to a total area of 550,000 hectares in the states of Pernambuco and Paraiba, it was found that most of them were proposing sugar as the crop to be cultivated by the new farmers, generating a production far in excess of demand, and defeating the purposes of the sugar rationalization program. In addition, farmers appealed for higher payments for their lands than those established in the law creating PROTERRA, introducing a source of protracted litigation for which INCRA was unprepared. The Government decided, therefore, to modify the program assigning the preparation of the land redistribution program and the cultivation plans for new crops to INCRA, and indicating that

owners would be paid according to a pre-established schedule of values for bare land and with no right of appeal. This amounts, however, to a virtual paralyzation of the program, since INCRA has neither the technical nor organizational capacity to subdivide large farms, nor to supervise the implementation of the program. In addition, there is inadequate knowledge about the production possibilities of the redistributed lands. The present landowners are likely to keep the areas most suitable for sugarcane in line with their own interest and in accordance with the Government's policy of increasing productivity of the sugar industry, leaving for the former laborers and sharecroppers lands of inferior quality in which they would continue to grow food crops for their meager subsistence much as before.

103. A reform of the land tenure situation, including land redistribution in latifundio areas and land consolidation in minifundio areas, associated with the resettlement of part of the displaced farmers in colonization areas outside of the Northeast, would be an important step for dynamizing the agricultural structure. Industrial crops, which in some cases present economies of scale, could still be produced under cooperative arrangements, but there would be a better combination of land and labor and more incentives for the commercial production of food crops.

104. It has been shown that returns to scale for the same types of land are relatively constant in Brazilian agriculture, that is, for the same level of input use small farms are as efficient as large farms. 1/ In addition, the intensity of land use declines as farm size rises, independently of the quality of the land, indicating that a distribution of land from large farms to small farms would increase land utilization and therefore agricultural production. In this context, short run policies such as support prices, subsidized input prices and credit, agricultural extension, and storage and transport infrastructure probably would do little to correct structural distortion of land and labor use in agriculture. Instead, they would induce the agricultural system to expand further on the same base of factor allocation. This would not impede the growth of output as long as additional lands can economically be brought into cultivation. Ensuring longer term agricultural growth would, however, require a correction of the distorted base of factor allocation.

105. In both the colonization programs already underway and the proposed land redistribution in the Northeast, the required investment as well as the administrative and technical assistance setup appear to exceed the possibilities of mobilizing resources for this purpose, particularly if these activities are to be carried out in a scale that would generate significant changes in the overall pattern of income distribution. A new approach would have to be found, inducing an improvement in the tenure and production conditions of small farmers where they are presently located to reduce the cost of having to set up new basic infrastructure in unsettled areas, combined with selective and organized

---

1/ William R. Cline: Economic Consequences of a Land Reform in Brazil. North Holland Publishing Company, Amsterdam, 1970.

colonization to reduce the pressure on land on the most densely populated areas of the Northeast. 1/

106. Ownership of land is an important factor in the decisions to invest and to adopt modern technologies to increase productivity. With the exception of the few renters of farms of medium or large sizes, which are normally large producers themselves, the vast majority of small renters, sharecroppers and tenant workers, have only a minimum of security of tenure and very limited expectations to obtain incomes above the subsistence level. At best, security of tenure lasts during one agricultural year, and in many cases the lands given for rent or for tenancy or sharecropping are of below average quality and produce low yields. In most cases, the small renters and sharecroppers find themselves in a situation relatively similar to landless workers in terms of standard of living, with the only difference being the form in which their income is obtained.

107. Although a solution of the land tenure problem would be a precondition for successful integrated rural development projects, it would be unrealistic to assume that it could take place at a regional scale. Besides the political difficulties of affecting economically powerful landowners, a substantial amount of time, effort and resources would be required to capacitate the former tenants and to provide them with the improved inputs and techniques required to take advantage of the better combination of land and labor. A gradual approach concentrating efforts for modifying the land tenure situation in those areas selected for integrated rural development projects would have better prospects of success.

Scope of a Program to Reach Small Farmers

108. Of the government programs favoring agriculture, those having the greatest potential for reaching the poorer farmers and improving their productivity and living conditions are: (a) research on new cash crop varieties and techniques of cultivation adapted to the conditions prevailing in predominantly small farm areas, that would be capable of sufficiently high yields to create a marketable surplus above the farmers' requirement for self-consumption; (b) an effective extension service, reaching large number of small farmers

---

1/ Estimates have put underemployment in the Northeast at some 1.8 million workers. Even if the regional agricultural and industrial growth targets for the decade are met, this would only absorb the increase in labor force and some 1.2 million of the backlog of underemployed, indicating that under the present structure some 600,000 workers would have to be settled in other areas. Even under the most optimistic assumptions, the Amazon settlements would absorb some 150,000 families during the decade (involving some 375,000 workers). The rest would have to migrate to the southern states or would have to be accommodated in the Northeast, through a change in the factor proportions of the region involving a more labor-intensive use of available land and capital.

through cooperatives of community leaders; (c) in some regions, improvement in the man-land ratio through colonization and land redistribution, and eliminating precarious systems of land tenure; (d) availability of financing for working capital and investments for small farmers under administrative arrangements that permit the timely and efficient processing of the loans; and (e) marketing and distribution channels that facilitate the timely flow of inputs into the farm and of products from farm to market. These programs should be complemented by action taken in the education, transport (feeder roads) and health sectors, to provide an integrated package capable of incorporating the small subsistence farmers into the mainstream of the country's economic activity. While these various lines of action have been pursued at the national or regional level at one time or another, the basic condition for their overall effectiveness is that they coincide at a given moment in time and on a specific target group of farmers. Unless these measures are properly interrelated to take full advantage of their complementarities, the overall viability of the package would be doubtful.

109. This integrated approach is being explored by the Brazilian Government, which has recently established an Interministerial Committee to study and prepare integrated rural development projects in selected areas of the Northeast. Federal support and the strengthening of the national or regional institutions dealing with a specific service (i.e., EMBRAPA for research, ABCAR for extension, etc.) are crucial for the viability of these projects. Their ultimate success will depend, however, on the extent to which they are geared to the specific requirements of a particular target group of farmers, and on the existence of an administrative set-up at the local level with sufficient autonomy to effectively coordinate and deliver the various services required to improve the productivity and living conditions of those farmers.

III. THE PUBLIC SECTOR AND MOBILIZATION AND UTILIZATION OF SAVINGS

110. The Brazilian Government has substantial direct influence over the mobilization and utilization of savings in the economy as a consequence of the size and complexity of the public sector, the extent of Government ownership of and/or participation in directly productive enterprises, and the use of fiscal incentives. In addition, there is extensive use of monetary policy as one of the major instruments for influencing production and investment decisions through the channelling of savings into financial intermediaries and attempting to influence their allocation.

A. Public Saving and Investment

111. The Brazilian public sector consists of the Central Government, state and local governments: autarkies (independent agencies of federal, state and local governments); federal and state enterprises and "mixed" enterprises. The Central Government is the key entity since it collects the majority of tax revenues, allocating them for direct federal expenditures, revenue sharing with other governments, and transfers to the rest of the public sector, especially autarkies and government enterprises. State and municipal governments play a much larger role in Brazil than in other Latin American countries as their combined revenues, the base of which is the value added tax (ICM), are about three-fourths as large as those of the federal government. Local governments have primary responsibility for the provision of education and basic urban services. The strong involvement of the public sector in the commodity producing sector is evidenced by the fact that 14 of the 20 largest companies in Brazil are government controlled, most being "mixed enterprises" with a small minority ownership in private hands.

B. Central Government Operations

112. One of the keys to the gradual price stabilization of the economy has been the virtual elimination of public sector deficit financing as a generator of monetary expansion. This has largely been the result of the reform of the revenue structure introduced in 1967, the most important elements of which were the transformation of state and federal excise taxes into value-added form, elimination of stamp taxes and introduction of a system of revenue sharing among federal, state and municipal governments. These reforms were combined with a program of strong control over current expenditures, primarily through a rationalization of the civil service. Improvements in the revenue structure and limitation of current expenditures allowed simultaneous expansion of capital expenditures and transfers to the rest of the public sector and a continuous reduction of the Central Government's cash deficit.

113. The tax system has proven to be quite buoyant with respect to domestic product as Central Government revenues have expanded from 9.5% of GDP in 1969 to 13.4% in 1973. Part of this growth has been the result of bringing into the budget revenues previously not included, i.e., half the Article 34/18 tax incentives, now applied for the PIN and PROTERRA programs, and the financial operations tax, shifted from the Central Bank to the Central Government. In addition, a new education payroll tax was enacted in 1969. However, even discounting these factors, Central Government tax collections would have increased 20% faster than GDP, largely as a result of the very good performance of income tax collections which increased by 18.6% per year over 1967-73. Central Government revenues are estimated to have increased sharply in 1973, 33% in nominal terms, despite measures which were expected to adversely affect collections. Income tax brackets were altered, raising tax rates on upper income taxpayers while basic tax deductions were increased, exempting many relatively lower income taxpayers. In addition, import duties and indirect taxes on many raw materials, intermediate goods and fuels were reduced.

Table 28: CENTRAL GOVERNMENT REVENUES, 1967-73

(Million 1968 Cr$)

	Value		Composition		Percent of GDP		Annual Growth
	1968	1973(Est.)	1968	1973	1968	1973	196 -73
Indirect Taxes	5,648	13,639	64.8	62.9	6.2	8.4	15.8
Industrialized Products	3,632	7,719	41.7	35.6	4.0	4.8	13.4
Import Duties	473	1,515	5.4	7.0	0.5	0.9	21.7
Petroleum Sole Tax	1,367	2,288	15.7	10.6	1.5	1.4	9.0
Electric Energy Sole Tax	134	642	1.5	3.0	0.1	0.4	29.5
Education Salary Tax	-	217	-	1.0	-	0.1	-
Financial Operations	-	1,002	-	4.6	-	0.6	-
Other	42	256	0.5	1.1	-	0.1	35.1
Direct Taxes	1,982	6,382	22.7	29.4	2.2	3.9	21.5
Income Tax	1,982	5,512	22.7	25.4	2.2	3.4	18.6
Personal	(242)	(1,245)	(2.8)	(5.7)	(0.3)	(0.8)	(30.8)
Business	(809)	(1,604)	(9.3)	(7.4)	(0.9)	(1.0)	(15.0)
Withheld at Source	(931)	(2,653)	(10.7)	(12.2)	(1.0)	(1.6)	(19.1)
For Special Programs	-	880	-	4.1	-	0.5	
PIN	-	(531)	-	(2.4)	-	(0.3)	
PROTERRA	-	(349)	-	(1.6)	-	(0.2)	
Miscellaneous Receipts	1,083	1,649	12.4	7.6	1.2	1.0	7.3
TOTAL	8,713	21,670	100.0	100.0	9.5	13.4	16.4

Source: Ministry of Finance and Mission estimates.

Expenditures

Table 29: CENTRAL GOVERNMENT EXPENDITURES, 1967-73

(Million 1968 Cr$)

	Value		Composition		Percent of GDP		Annual Growth
	1968	1973(Est.)	1968	1973	1968	1973	1968-73
Current Expenditures	7,627	11,579	82.7	61.1	8.3	7.1	7.2
Direct Federal	3,145	4,140	34.1	21.8	3.4	2.6	4.7
Civilian Personnel	(1,395)	(1,153)	(15.1)	(6.1)	(1.5)	(0.7)	-3.2
Military Personnel	(1,166)	(1,993)	(12.6)	(10.5)	(1.3)	(1.2)	9.4
Other	(583)	(994)	(6.3)	(5.2)	(0.6)	(0.6)	9.2
Federal Transfers for Personnel	2,843	4,165	30.8	22.0	3.1	2.6	6.6
Family Bonus	(229)	(288)	(2.4)	(1.5)	(0.2)	(0.2)	(3.9)
Pension and Annuities	(1,049)	(1,938)	(11.4)	(10.2)	(1.1)	(1.1)	(10.8)
To rest of Public Sector	(1,565)	(1,938)	(17.0)	(10.2)	(1.7)	(1.1)	(3.6)
Other Current Transfers	1,639	3,279	17.8	17.3	1.8	2.0	12.2
Interest	(72)	(452)	(0.8)	(2.4)	(0.1)	(0.3)	(35.5)
Other	(1,569)	(2,822)	(17.0)	(14.9)	(1.7)	(1.7)	(10.3)
Capital Expenditures	1,590	7,380	17.2	38.9	1.7	4.6	29.6
Direct Investment	925	3,396	10.0	17.9	1.0	2.1	24.2
Financial Investment	63	413	0.7	2.2	0.1	0.3	36.7
Capital Transfers	602	3,571	6.5	18.8	0.7	2.2	34.8
TOTAL	9,217	18,960	100.0	100.0	10.1	11.7	12.8

Source: Ministry of Finance and Mission estimates.

114. After being reduced sharply from 8.3% of GDP in 1967 to 6.6% in 1968, current expenditures of the Central Government have been averaging about 7% of GDP in recent years, showing no trend toward increasing or decreasing. The most significant factor in this has been the very low rate of increase of personnel expenditures, as direct federal expenditures for civilian personnel declined in real terms between 1967 and 1973 (this was offset to some extent by increasing pension costs associated with retirement of excess personnel). In addition, discretionary transfers destined to finance the deficits of government entities and enterprises have declined

substantially relative to GDP, despite a relatively stable transfer equivalent to 0.3% of GDP to finance the deficit of the federal railway system. As a result of the limitation of current expenditures, the Central Government's current surplus has been increased from -0.2 to 4.4% of GDP between 1967 and 1973, making possible a rapid expansion of capital expenditures, almost 30% per year in real terms, while the cash deficit was reduced from 1.9% of GDP in 1967 to an almost negligible 0.1% in 1973. Although the financing requirements of the Central Government have been relatively small, the use of

Table 30: CENTRAL GOVERNMENT CASH OPERATIONS, 1967-73

(Percent of GDP)

	1967	1968	1969	1970	1971	1972	1973
Current Revenues /1	8.1	8.1	8.8	9.2	9.8	11.2	11.6
Current Expenditures	8.3	6.6	6.7	6.9	7.2	6.9	7.2
Current Account Surplus	-0.2	1.5	2.1	2.3	2.6	4.3	4.4
Capital Expenditures	1.7	2.8	2.7	2.7	2.9	4.6	4.6
Cash Deficit	-1.9	-1.2	-0.6	-0.4	-0.3	-0.3	-0.1
Financing	1.9	1.2	0.6	0.4	0.3	0.3	0.1
Bonds and Bills	1.0	-0.1	1.2	0.8	1.7	2.7	-
Other	-	0.2	0.2	0.1	0.1	-	-
Monetary Authorities	0.9	1.1	-0.8	0.5	-1.5	-2.5	-

/1 Less revenue sharing.

Source: Ministry of Finance and Mission estimates.

treasury bills and indexed bonds in open market operations has led to a large increase in domestic debt. Only 10% of the servicing costs of this debt has been reflected in the Central Government's budget, the rest is being financed with the proceeds of new issues. As a result of open market operations, internal debt outstanding has risen from 3.5% of GDP in 1968 to 8.7% in 1972.

Table 31: OUTSTANDING DOMESTIC PUBLIC DEBT OF THE CENTRAL GOVERNMENT

(Percent of GDP)

	1968	1969	1970	1971	1972
Total Outstanding	3.5	4.4	5.8	6.6	8.7
Treasury Bills	-	-	0.4	1.7	3.4
Indexed Bonds	3.5	4.4	5.4	4.9	5.3
Held by Public Entities	0.7	1.4	1.7	1.6	2.6
Held by Private Sector	2.8	3.0	3.7	3.3	2.7

Source: IMF.

While the fact that interest payments and monetary correction are not included in current expenditures would tend to result in an overstatement of government saving, government deposits in the Central Bank are not credited with interest or monetary correction (earned on investment abroad of foreign exchange reserves), thus understating receipts.

Fiscal Incentives

115. The elasticity demonstrated by the fiscal system is due, on one hand, to improved tax administration and, on the other, to the fact that taxes are linked to the performance of the most dynamic sectors of the economy, industry and foreign trade. The increase in revenues relative to GDP has occurred despite the fact that the Brazilian Government has made extensive use of fiscal incentives to encourage export-oriented activities, to influence the location of industry and encourage the development of a domestic capital market. Export incentives provide firms with:

(a) exemption from federal and state value added taxes;

(b) exemption from payments of import duties on imports required in the last stage of production;

(c) concession of tax credits calculated as a fixed percentage of the value of goods exported, generally equal to the federal value added tax incident on the product, up to a maximum of 30% of the exported portion;

(d) exemption from taxes on profits generated by export sales;

(e) rebate of duties paid on inputs used by exporting firms in production for the domestic market up to a maximum of 30% of the value of exports.

It has been calculated that these incentives generally permit Brazilian producers to export at a price 44% below domestic prices. 1/ While the majority of this is due to exemption from indirect taxes, there is a subsidy element of about 17%. To some extent, these export subsidies can be considered an offset to the effects of a long policy of import substitution and an exchange rate policy which put actual and potential exporters at a chronic disadvantage.

116. The fundamental subsidy element for influencing industrial location is the Article 34/18 tax incentive mechanism. Under this program registered Brazilian corporations and individuals may reduce their federal tax liability by 50% by opting to invest the corresponding tax saving in projects approved by the Northeast development agency SUDENE or the Amazon development agency SUDAM. These incentives were affected by the creation of PIN and PROTERRA whereby 50% of tax credits have been earmarked for government direct investment in agriculture and infrastructure through 1976.

1/ "Current Economic Position and Prospects of Brazil," 38-BR, March 12, 1971.

117. Most recent actions increasing fiscal incentives have been directed toward encouraging the development of the domestic capital market by providing expanded incentives to corporations for the issuance of stock and debentures and to individuals for holding such financial assets. Decree-law 1283 of August, 1973, expands incentives already available under other laws and provides that:

(a) The portion of cash dividends paid by open capital companies 1/ in any year which exceeds 25% of the taxable profit of the preceding year may be deducted by the company as a business expense in the year of payment up to 25% of gross taxable profits of that year.

(b) Individuals may deduct from taxable income 30% of the amount used to purchase newly issued nominative shares (provided they are held two years), or mutual funds (held for three years), or convertible debentures at the time they are converted to shares.

(c) Cash dividends are now either subjected to a withholding tax of 10% with no other taxes are applied, or individuals may deduct the gross amount of cash dividend received to the extent they are used to subscribe in the purchase of shares of any open capital company.

It should be noted that Brazilian law generally limits the total of an individual's personal deductions to 50% of his taxable income. Nevertheless, between capital market incentives and the Article 34/18 scheme individuals can greatly reduce the burden of their personal income taxes and this undoubtedly reduces the potential progressivity of the tax system.

C. State and Local Finances

118. The broad ranging tax reform of the mid-1960's substantially altered and significantly improved the fiscal position of state and municipal governments. State turnover taxes which had proven to be inelastic, inefficient and economically distorting were replaced by the more productive and more nearly neutral value added tax (ICM) which now constitutes the basic source of revenues both for the states, providing over 90% of total revenues, and for the municipalities with which it is shared. The tax is levied by the state of origin of the product and the bulk of the tax base is, therefore, assigned to states with a strong productive base. The state of Sao Paulo, for instance, receives 48% of all ICM tax collections in Brazil. Since the ICM is shifted forward to the price of the product, this system works to the disadvantage of the less developed states which are net importers from the developed regions. In order to remedy this, the ICM has been supplemented by a system of intergovernmental transfers.

1/ Open capital companies have at least 20% of voting shares publicly owned and are committed to increase public ownership over time to 49%.

119. While the imposition of the ICM led to a large initial increase in state and local revenues, they were 27% higher in real terms in 1967-68 than they had been in the preceding two years, the legislation also provided for a gradual reduction of tax rates in four annual half-percentage point steps beginning in 1970. As a result of the reduction in rates and the practice of some less developed states of exempting certain transactions as an incentive to industrial investment, ICM collections have not kept pace with GDP growth, falling from 8.8% of GDP in 1968 to 7.4% in 1971. Revenue sharing by the federal government with state and local governments involves distribution of 12% of the federal tax on industrialized products (IPI) and the income tax plus earmarked shares of the taxes on fuels, mineral products and electric energy. The sharing formulas are constructed so that poorer states receive proportionately larger shares. In 1972 the states of the Northeast received 45% of total shared and earmarked tax revenues. On a per capita basis they received about 40% more than the rich southeastern states and the poorest state, Piaui, received 90% more per capita than the richest state, Sao Paulo. Unfortunately, however, the amount being redistributed in this manner has declined relative to GDP; from 2.2% in 1968 to 1.8% in 1973. Thus, the fiscal capacity of the state and local governments has been limited by their own relatively inelastic revenues and slowly increasing revenue sharing from the federal government while they faced increasing needs for both current and capital expenditures.

Table 32: STATE GOVERNMENT FINANCES, 1968-71

(Million 1968 Cr$)

	Value		Percent of GDP		Rates Increase
	1968	1971	1968	1971	1968-71
Current Revenue	10,067	11,641	10.0	8.8	5.0
ICM	(8,774)	(9,851)	(8.8)	(7.4)	(4.0)
Other	(1,293)	(1,790)	(1.2)	(1.4)	(11.5)
Revenue Sharing	2,154	2,287	2.2	1.7	2.1
Current Expenditure	9,312	10,787	9.3	8.1	5.0
Current Account Saving	2,909	3,142	2.8	2.4	2.6
Capital Expenditure	3,026	4,230	3.0	3.2	11.8
Deficit	117	1,088	0.2	0.8	
Financing	117	1,088	0.2	0.8	
Foreign Loans	35	179	0.1	0.1	
Other	82	910	0.1	0.7	

Source: Appendix Table 5.6.

120. The expansion of state and local current expenditures has been quite restricted, growing by only 5% per year over 1968-71. While capital expenditures have increased fairly rapidly, they did so at the cost of increasing heavy foreign and domestic borrowing. It is difficult to say that the fiscal situation is worse for the poorer states than the rapidly urbanizing richer states which have to bear increasingly high costs of public infrastructure and services. The appropriate solution to the problem is not a redistribution of receipts from existing taxes but rather an increase in the amount of revenue shared. It should be pointed out that increased revenue raising efforts by the local government themselves are possible. Property tax collections, which have performed poorly, could be expanded, and the practice of states competing for industries by offering exemptions from the ICM serves no useful purpose. The federal government's concern about the economic basis of the state government expenditures could be reduced by making additional revenues available for specific programs on a matching basis.

Tax Burden and Tax Equity

121. Brazil's tax burden is relatively high, as in 1971 tax collections reached 27.8% of GDP. A substantial part of these resources are, however, transferred back to the private sector. Revenues from the Coffee Contribution Quota generally finance private investment in the coffee sector; receipts of the Tenure Guarantee Fund in part finance private housing; Social Integration Fund contributions are used to finance largely private industrial investment; finally, a part of Central Government revenues are used to capitalize government-owned financial intermediaries which lend, in part, to private enterprises. The extent of transfers in the fiscal mechanism is evident from the fact that in 1969 (the latest year for which national accounts' breakdowns are available) total consumption and investment expenditures of the public sectors were equal to 15.5% of GDP while the tax burden was 28.2%.

Table 33: TAX BURDEN, 1968 and 1971

(Billions 1968 Cr$)

	Value		Percent of GDP	
	1968	1971	1968	1971
Federal Government	10.3	15.3	10.3	11.5
Local Governments	10.0	11.6	10.1	8.8
Autonomous Entities				
Social Security	4.2	6.1	4.2	4.6
Coffee Contribution Quota	1.6	0.8	1.6	0.6
Tenure Guarantee Fund	1.2	1.1	1.2	0.9
Social Integration Fund	-	0.2	-	0.1
Other	0.8	0.0	0.8	0.5
Total Taxes	2.2	35.8	28.2	27.0
Article 34/18 Credits	0.8	1.0	0.8	0.8
Overall Tax Burden	29.0	36.8	29.0	27.8
GDP	99.8	132.7	100.0	100.0

Source: Ministry of Finance and Mission estimates.

122. The revenue system cannot be said to be very progressive, relying as it does predominantly on indirect taxes and payroll taxes which, whether shifted forward to prices of goods or backward to wages, are generally borne by middle income groups. The system is only progressive in the sense that consumption taxes often exclude agricultural products and that individuals, like subsistence farmers, whose money income is a small part of their total income, pay little taxes. The income tax rate schedule is progressive but fiscal incentives have lightened the burden to the extent where the top 10% of taxpayers (who are probably in the very top few percentiles of total income recipients) pay income taxes at an effective rate of 10% of gross income. 1/ The expansion of fiscal incentives during 1973 in order to encourage the development of the domestic capital market will further reduce the progressivity of the tax system.

D. Financing Public Investment, 1973-77

123. The most recent economic report analyzed the Government's investment program for 1972-74, 2/ the period covered by the First National Development Plan which is now in execution. The analysis was supplemented by investment programs of mixed enterprises in the energy, mining, steel and telecommunications sectors and by programs for financial investment channelled through government-owned intermediaries for housing, industry and regional development. An attempt was made, as well, to extend the analysis into the next three-year period, 1975-77, for which the Government is in the very early stages of plan preparation. These projections of public investment, which indicate a rate of increase of 8.8% over 1973-77, have been used as a basis for the present analysis of financing prospects. The extent of the financing gap will depend on the rate at which public sector savings can be expanded which is, given the tax system, largely dependent on the rate of growth of the economy and governmental decisions about the appropriate rate of expansion of current budgetary expenditures. This analysis assumes that there will be no further reductions in tax rates or significant new fiscal incentives and that the average rate of GDP growth will be 8%.

1/ Langoni, op cit., p. 19

2/ The Economic and Social Development of Brazil, 38-BR, March 12, 1973.

	Value (Million 1968 Cr$)			Composition			Percent of GDP		
	1969	1973 (Est.)	1977 (Proj.)	1969	1973	1977	1969	1973 (Est.)	1977 (Proj.)
Central Government	2,325	7,180	10,825	21.9	35.3	36.8	2.1	4.4	4.9
State and Local Governments	2,415	5,184	7,091	22.7	25.5	24.1	2.2	3.2	3.2
Social Security	232	445	960	2.2	2.2	3.3	0.2	0.3	0.4
Federal Autarkies 1/	29	110	2	0.2	0.5	-	0.0	0.1	0.0
Coffee Account	543	390	284	5.1	1.9	1.0	0.5	0.2	0.1
Official Credit Agencies 2/	2,739	2,931	3,773	25.8	14.4	12.7	2.5	1.8	1.7
Tenure Guarantee Funds	(1,051)	(662)	(431)	(9.9)	(3.3)	(1.5)	(1.0)	(0.4)	(0.2)
Financial Operations	(294)	(-)	(-)	(2.8)	(-)	(-)	(0.2)	(-)	(-)
PIS	(-)	(914)	(1,447)	(-)	(4.5)	(4.9)	(-)	(0.6)	(0.7)
Investment Tax Credit	(1,050)	(890)	(1,254)	(9.9)	(4.4)	(4.3)	(1.0)	(0.5)	(0.6)
BNDE Operating Profits	(99)	(171)	(231)	(0.9)	(0.8)	(0.8)	(0.1)	(0.1)	(0.1)
BNH Operating Profits	(246)	(294)	(409)	(2.3)	(1.4)	(1.4)	(0.2)	(0.2)	(0.2)
Mixed Enterprises 3/	2,339	4,098	6,508	22.2	20.1	22.1	2.1	2.5	3.0
TOTAL	10,622	20,338	29,443	100.0	100.0	100.0	9.8	12.6	13.4
GDP	108,869	161,921	220,292				100.0	100.0	100.0

1/ Federal Autarkies include agencies such as the National Highways Department (DNER), Railways Department (DNEF), Ports Department (DNPVN), Merchant Marine Superintendency (SUNAMAN), Divil Aviation Authority (DAC), Federal Universities, regional development agencies (SUDENE, SUDAM, SUDESUL, SUDESF, SUDECO), Water and Sewerage Department (DNOS), Agrarian Reform Agency (INCRA), Forestry Institute (IBDF), Fishing Superintendency (SUDEPE) and Supply Superintendency (SUNAB). Although these agencies have some independent revenue sources the bulk of their funds come from the central government.

2/ The official credit agencies include, inter alia: the Housing Bank (BNH) which allocates the Tenure Guarantee Fund; the Federal Savings Bank (CEF) which allocates the Social Integration Fund; the National Economic Development Bank (BNDE) which allocates some of the financial operations tax resources and the Bank of the Northeast (BNB) and of the Amazon (BASA) which allocate most of the investment tax credit resources. Note that the coffee account is administered by the monetary authorities.

3/ Includes the three mixed enterprises making up most of the flat steel products sector (CSN, COSIPA and USIMINAS), the major iron ore mining company (CVRD), the state petroleum company (PETROBRAS), the state electric power network (ELETROBRAS), and associated companies) and various telecommunications enterprises (EMBRATEL, ECT and CTB).

Source: Federal Government, Appendix Table 5.5 ; State and Municipal Governments, Appendix Table 5.6 ; Other, 3/-3/, Volume II, Table 5.13.

124. It is estimated that combined savings of the federal, state and local governments have expanded from 4.3% of GDP in 1969 to 7.6% in 1973, largely reflecting revenue performance of the Central Government. As a result, total public sector saving has expanded from 9.8 to 12.6% of GDP. The outlook for 1974-77 is for a further expansion of saving, albeit at a slower pace, again largely because of the high elasticity of the Central Government's revenue structure (estimated at approximately 1.2). The state and local government's revenue structure is somewhat less elastic than that of the federal government but nevertheless, because of the stabilization of ICM rates in 1974, their revenues are expected to increase relative to GDP, from 9.1% in 1973 to 9.4% by 1977. A fairly rapid rate of expansion of current expenditures has been projected for all levels of government, 8.0% for federal and 10.0% for local governments (compared to 7.2% and 5% respectively for the period 1967-73). While it is difficult to be precise about the appropriate rate of expansion of current expenditures, it is clear that if there is to be increased emphasis on socially oriented programs, higher rates of growth will be required than in the past. It has been assumed further that there will be an increase in federal government revenue sharing with local governments in order to balance fiscal capacities with expenditure needs. Rather than assume a rigid formula for sharing of specific taxes, an increase in revenue sharing from the actual 13.2% of federal revenues in 1973 to 15.0% in 1975 is suggested. This increase would seem to be sufficient to assure that local governments can fulfill their capital expenditure programs, at higher levels of current expenditures without increasing reliance on domestic or foreign borrowing, while the federal government's budget remains balanced.

Table 35: SAVING OUTLOOK: CENTRAL AND LOCAL GOVERNMENTS

(Million 1968 Cr$)

	Value		Percent of GDP		Rate of Increase
	(Est.) 1973	(Proj.) 1977	1973	1977	1973-77
Central Government					
Current Revenues	21,670	31,268	13.4	14.2	9.6
Less: Revenue Sharing	2,911	4,690	1.8	2.1	12.7
Current Expenditures	11,579	15,753	7.2	7.2	8.0
Current Saving	7,180	10,825	4.4	4.9	10.8
State and Local Governments					
Current Revenues	14,735	20,647	9.1	9.4	8.8
Plus: Revenue Sharing	2,911	4,690	1.8	2.1	12.7
Less: Current Expenditure	12,462	18,246	7.7	8.3	10.0
Current Savings	5,184	7,091	3.2	3.2	8.1

Source: Appendix Tables 5.5 and 5.6.

125. Ongoing expansion programs and a policy of realistic pricing of goods and services produced by government-owned or controlled enterprises indicate that their savings will also continue to increase. The coffee account is also likely to be a small net saver over the next few years as the coffee tax will probably generate all the resources necessary to finance expansion programs and production credit. Internal coffee prices will probably not have to be increased through reduction of the contribution quota and the relatively poor production prospects make it unlikely that the Government will have to purchase surplus coffee. Combined savings attributable to the operations of the Tenure Guarantee Fund and other government-forced savings schemes can be expected to decline relative to GDP as the programs mature and disbursement of benefits and withdrawals of savings by workers begin to catch up to contributions. As a result, savings of the rest of the public sector are projected to increase from 5.0% of GDP in 1973 to 5.3% in 1977 which together with the increase in combined savings of state, federal and local governments from 7.6% to 8.1% of GDP, would bring total public savings to 13.4% of GDP in 1977, compared to 12.6% in 1973.

Table 36 : PUBLIC SECTOR INVESTMENTS

	Value (Million 1968 Cr$)			Composition			Percent of GDP		
	1969	1973	1977	1969	1973	1977	1969	1973	1977
1. Transportation	2,545	3,613	4,380	19.5	16.8	14.5	2.3	2.2	2.0
2. Electric Power	2,353	3,286	4,217	18.0	15.3	14.0	2.2	2.0	1.9
3. Telecommunication	492	590	465	3.8	2.7	1.5	0.5	0.4	0.2
4. Education	625	688	899	4.8	3.2	3.0	0.6	0.4	0.4
5. Health and Social Welfare	522	1,361	1,826	4.0	6.3	6.1	0.5	0.8	0.8
6. Regional Development	66	841	984	0.5	3.9	3.3	0.1	0.5	0.4
7. Agriculture	83	119	151	0.6	0.6	0.5	0.1	0.1	0.1
8. Industry and Mining	917	2,462	3,324	7.0	11.5	11.0	0.8	1.5	1.5
9. Other Federal Direct Investment	479	2,558	4,590	3.7	11.9	15.2	0.4	1.6	2.1
10. Other Local Direct Investment	2,193	1,621	2,713	16.7	7.5	9.0	2.0	1.0	1.2
Total Fixed Investment	10,276	17,139	23,548	78.6	79.8	78.2	9.4	10.6	10.7
11. Housing Program	1,388	1,495	1,822	10.6	7.0	6.0	1.3	0.9	0.8
12. Industrial Development	506	1,865	3,202	3.9	8.7	10.6	0.5	1.1	1.5
13. Regional Development	909	980	1,555	7.0	4.6	5.2	0.8	0.6	0.7
Financial Investment	2,803	4,340	6,581	21.4	20.2	21.8	2.6	2.7	3.0
Total Investment	13,079	21,479	30,130	100.0	100.0	100.0	12.0	13.3	13.7

Source: 1 - 8 and 11 - 13, and foreign financing, Table 5.14, 38-BR, Vol. II; 9, Table 5.5 and 10, Table 5.6.

126. The projected increase in public investment, 8.8% per year, would imply an increase from 13.3% of GDP in 1973 to 13.7% by 1977. This would mean a gap between public saving and public investment equivalent to only 0.3% of GDP in 1977, compared with 2.2% in 1969 and 0.7% in 1973. A gap of this magnitude could be financed without difficulty, even without resorting to net domestic borrowing by the public sector. External borrowing of this magnitude would be equivalent to only about 17% of total net external borrowing required for balance of payments' purposes (medium- and long-term loans plus financial credits), whereas public sector utilization of external credit was equal to 46% of net external borrowing in 1969 and 23% in 1973. The low proportion in 1973 was largely due to a heavy inflow of financial credits in that year, largely destined for the private sector. It appears that a considerably higher proportion of external borrowing could be utilized by the public sector in 1977, implying that a larger gap than 0.3% of GDP could be accommodated. For example, net external financing equivalent to 0.8% of GDP would still absorb less than half of all net external borrowing. This indicates that, unless the future level of investment has been systematically understated, there may be scope for a more ambitious investment program than present plans suggest. There is actually a tendency for the federal government to deliberately underestimate its revenues in order to discourage appeals from state governments, autarkies and enterprises for additional revenues. While this practice has the advantage of avoiding the possibility of overcommitment of fiscal resources, it tends to discourage realistic planning of investment by public sector entities. Multiyear investment programs which normally cover a three-year period, do not include allocations for projects which are to begin in the latter years of the budget period, nor do they normally make allowance for price changes. Changes in these practices would lead to a general improvement in planning procedures. Naturally, in planning the overall level of public investment, the total claims on resources must be carefully taken into account.

127. *The size and composition of the investment programs for the 1975-77* period should be reviewed in the light of recent developments in the world economy, especially as regards petroleum. It is clear that recent and projected increases in world petroleum prices should be taken into consideration in planning public investment for the 1975-77 period and beyond.

Table 37: PUBLIC SECTOR INVESTMENT AND ITS FINANCING, 1969-77

(1969 actual, 1973 estimated and 1977 projected)

	Value (Million Cr$)			Composition			Percent of GDP		
	1969	1973	1977	1969	1973	1977	1969	1973	1977
Total Investment	13,079	21,479	30,130	100.0	100.0	100.0	12.0	13.3	13.7
Public Saving	10,622	20,338	29,443	81.2	94.7	97.7	9.8	12.6	13.4
Foreign Borrowing	807	1,242	418	6.2	5.8	1.4	0.7	0.8	0.2 /1
Disbursements	(1,185)	(2,072)	(1,439)	(9.1)	(9.6)	(4.8)	(1.1)	(1.3)	(0.7)
Amortization	(-378)	(-830)	(-1,031)	(-2.9)	(-3.9)	(-3.4)	(-3.0)	(-0.5)	(-0.5)
Net Domestic Borrowing	1,650	-101	-269	12.6	-0.5	-0.9	1.5	-0.1	0.1

/1 Programmed.
Source: Appendix Tables 5.7 and 5.8.

An ambitious program to increase hydroelectric generating capacity from 12,670 MW in 1971 to 22,600 MW by 1977 is already underway and an increase of 1,019 MW was achieved in 1972. During 1972, 22 electric energy projects were in execution, including construction of the first nuclear center. The program is proceeding on schedule; however, it may be possible to reexamine some hydroelectric sites which were not considered economical at lower fossil fuel prices to determine if additional expansion of hydroelectric capacity should be programmed beyond the Sete Quedas (Itaipu) facility which was expected to be the last major hydroelectric power project undertaken. This would, however, only influence the course of the power program beyond 1977.

128. Brazil, increasingly dependent upon imported petroleum as domestic production stagnates, has been accelerating its effort to increase domestic production. PETROBRAS has been carrying out an active offshore drilling program and has been involved in large scale geological and geophysical exploration in the interior of the country in order to maintain domestic production at one-third of requirements. It appears, however, that this effort will have to be expanded if it is to be successful in meeting its target as domestic production is now only 22% of consumption. The vast expanse of Brazil makes the task of exploration for petroleum expensive both in terms of financial and technical resources. While PETROBRAS is fully technically competent and has pursued exploration activities vigorously, additional technical and financial resources that could best be provided by foreign oil companies might be desirable at this time. The Government might give consideration to opening Brazil to exploration by foreign companies on a joint venture or service contract basis. Furthermore, in view of the limited success achieved so far in locating substantial new petroleum reserves, further attention should be given to the use of shale oil, of which considerable reserves exist, if the preliminary tests of the Irati pilot plant prove successful. While a substantial expansion of petroleum refining capacity is underway as well as an expansion of the petrochemicals industry, recent bottlenecks resulting from short supply of domestic petrochemical production might suggest a re-examination of probable future requirements and of the scope of the investment program in this sector.

129. The Government has underway an ample road construction program which, including those in the Export Corridors Program and the National Integration Program, was designed to add some 14,000 km of paved roads by 1974 to the country's 23,674 km which existed in 1970. In 1972 alone 3,750 km of paved roads were opened to traffic. The Government is also planning a substantial investment program for rationalization and improvement of the national railway systems and reduction of its deficit. These two programs should be reviewed simultaneously in the design of a national transportation system which makes optimum use of fuel resources. In this respect, special attention must be given to policies of pricing petroleum products and in assessing highway user charges. Additional consideration should also be given, in the light of rising world fuel prices, to development on urban transport strategy which is not so highly dependent upon use of private passenger vehicles.

130. In addition to public investment designed to directly complement and facilitate activities of the commodity producing sectors, there seems ample scope for expanding and accelerating public investment in social infrastructure including rural development, housing, urban services, water supply and health. This would indicate that there is scope for a more ambitious investment program for 1975-77 than is indicated by the preliminary plans of the major investing entities. It should be borne in mind that expansion of assistance to the lowest income groups in Brazil does not necessarily imply increased capital expenditures; it may require instead, increased revenue sharing with local governments, or assistance to specific local government programs on a matching basis, or expansion of federal current expenditures. It is worth reiterating that it will be difficult to expand programs designed to assist lower income groups unless the Government is willing to increase its current expenditures for remuneration of personnel and for education and training. Under these circumstances, the real trade-off of growth may arise from the attraction of scarce technical and managerial manpower away from the private sector and into public sector programs.

External Financing of Public Investment

131. It is estimated that an average of US$1.9 billion per year in gross disbursements on medium- and long-term loans would be required to sustain an 8% growth rate over 1974-79. Given the uncertainty about the size and composition of the public investment program over this period, it is not possible to directly relate these requirements to the financing gap in the public investment program. However, as an indication, comparison of requirements for medium- and long-term lending to fill the balance of payments gap for 1972-77 with costs of projects suitable for external financing (based on the project list presented in Volume III of 38-BR for which commitments were expected by 1975), revealed that external lenders would have to finance an average of approximately 40% of costs in order to fulfill external capital requirements. However, it was found that the direct foreign exchange component of those projects was only 17% of total project costs. The low foreign exchange component is attributable to the state of development of Brazil's domestic industry and the success of its civil works contractors. The indirect foreign exchange component of locally supplied equipment and civil works is also estimated at about 17%, bringing total direct and indirect foreign exchange cost up to about one-third of the cost of these projects. It should be pointed out, however, that the foreign exchange component of project costs is not uniform between sectors. Projects in agriculture, education and water supply and sewerage tend to have very low direct and indirect foreign exchange costs and external lenders must be prepared to finance substantial amounts of local costs if they wish to contribute significantly to the financing of projects in these sectors.

E. Monetary Policy and Credit Allocation

Monetary Management and Inflation Control

132. The objectives of Brazilian monetary policy are to control inflation and to influence the allocation of financial saving. The authorities realize that some inflation is inevitable and rather than artificially suppress it by excessive use of price controls and/or maintenance of artificially low interest rates and exchange rates, they have followed a monetary policy which sanctions a certain amount of inflation, while through automatic or semi-automatic adjustment of key prices (exchange rates, public utility tariffs and other officially controlled prices, government bond rates, wages, etc.) and capital values preventing economic distortions. These measures, however, place a limit on the rate at which inflation can be slowed and provide an element of residual inflation which can be eliminated slowly over time. In addition to the residual inflation, the authorities face the prospect of price increases resulting from rises in the international prices of tradeable goods and from the types of supply bottlenecks to which rapidly growing economies are prone. Monetary policy is thus made with an acceptable level of inflation in mind. In recent years the policy has been to program for gradually declining rates of inflation. Monetary programming generally involves targeting rates of expansion of the money supply consistent with anticipated growth of real GDP and the acceptable rate of price increase. No attempt is made to control the expansion of domestic credit which the authorities feel should be allowed to grow in accordance with the needs of an economy which is becoming increasingly sophisticated both in terms of productive interrelationships and financial intermediation. The primary source of expansion of liquidity, at least since 1971, has been the inflow of external capital resulting from a growing differential between domestic interest rates and the cost of funds from abroad. With the rapid improvement in fiscal performance and virtual elimination of the Central Government's cash deficit, the public sector has ceased to be a factor in generating expansion of the money supply. The major tool used by the monetary authorities in controlling the rate of expansion of the money supply has been open market operations through purchase and sales of short-term Treasury paper. The success of monetary policy is seen in the fact that the rate of inflation has, indeed, been gradually reduced and that, at least until 1972, the stock of monetary liabilities (currency, demand deposits and time deposits) has remained fairly constant relative to nominal GDP. However, despite the efforts of the monetary authorities to control the growth of the money supply, some acceleration was evident in the last quarter of 1972 and the first few months of 1973. The annual rate of expansion approached 42%, well above the targeted rate of inflation plus real GDP growth. The expansion of liquidity was the result of increased inflow of external capital approaching a rate with which the authorities were unable to cope using open market operations. Late in 1972, therefore, the authorities began to take measures to curb this capital inflow.

Table 38: BANKING SYSTEM:, ANNUAL EXPANSION AS A PERCENT YEAR-END MONEY SUPPLY AND YEAR-END STOCKS AS PERCENT GDP

	1968	1969		1970		1971		1972	
	Stock	Expansion	Stock	Expansion	Stock	Expansion	Stock	Expansion	Stock
Net Foreign Reserves	-1.5	1.6	0.5	1.3	1.6	1.2	2.4	3.6	5.5
Net Domestic Credit	21.8	3.2	19.5	3.1	18.0	3.8	17.2	2.9	16.3
Treasury	5.6	0.3	4.5	0.4	3.8	-0.4	2.5	-1.7	0.3
Rest of Public Sector	-4.2	-1.7	-4.9	-0.8	-4.5	-1.4	-4.7	-1.1	-4.8
Private Sector	19.0	6.4	20.6	5.4	21.1	7.5	23.2	7.9	25.9
Other Net	1.5	-1.7	-0.6	-0.9	-2.4	-2.0	-3.7	-2.2	-5.1
Monetary Liabilities	20.3	4.8	20.0	4.4	19.9	5.0	19.6	6.5	21.7
Currency	4.1	1.0	4.0	0.8	3.8	0.8	3.7	1.0	3.8
Demand Deposits	13.8	3.4	13.7	2.9	13.4	3.2	13.2	4.5	14.7
Time Deposits	2.4	0.4	2.2	0.7	2.4	1.0	2.8	0.9	3.1

Source: Central Bank.

External Financial Credits

133. Brazilian firms and financial intermediaries have been permitted to contract loans abroad under the terms of three laws; (Resolution 63 which permits borrowing abroad by financial intermediaries, Law 4131, which permits direct external borrowing by Brazilian firms, and Instruction 289, which governs short-term external borrowing). The utilization of these facilities for external borrowing has largely been a function of the differential between cost of borrowing in Brazil and cost of external borrowing, primarily on the Eurodollar market. The cost of external borrowing is determined by the Eurodollar rate, the risk premium for Brazilian borrowers, withholding taxes on interest payments and the exchange risk. In 1969-70 the cost of external borrowing was about 30% per year, generally above the cost of domestic borrowing including monetary correction. However, during 1971-72 Eurodollar interest rates dropped to 5-6%, the risk premium for lending in Brazil dropped to 1-1.5% reflecting improved evaluation of the country's creditworthiness, and interest withholding taxes were, for all intents and purposes, eliminated by double taxation agreements. Thus, although cost of domestic borrowing was declining along with the rate of inflation, foreign borrowing became considerably less expensive. This led to a rapid acceleration of external borrowing during 1971-72.

Table 39: RELATIVE COSTS OF FOREIGN AND DOMESTIC BORROWING, 1969-72

(Percent)

	1969-70	1972
Foreign Borrowing		
Eurodollar rate	9 - 11	5 - 6
Premium	2 - 3	1 - 1.5
Tax on interest remittance	2.2 - 2.8	-
Devaluation	13 - 14	9 - 10
	26.2 - 30.8	15 - 17.5
Domestic Borrowing		
Interest	9 /1	9
Monetary correction	20	16
	29	25

/1 Investment Bank rate.

Table 40: EXTERNAL FINANCIAL CREDITS OUTSTANDING
(Million US$)

End of Period	Resolution 63	Instruction 289	Law 4131	Total
1967				671.0
1968				1,083.0
1969	432.5	373.5	789.7	1,604.7
1970	635.2	381.2	1,250.2	2,284.6
1971	983.2	294.8	1,914.2	3,193.0
1972	2,018.4	207.4	3,302.5	5,528.3
1973	2,348.0	82.0	5,352.0	7,782.0

Source: Central Bank.

134. The reluctance of Brazilian authorities to limit the inflow of financial credits is understandable. First, it was not possible for them to anticipate the tremendous increase in exports which they ultimately enjoyed; second, it was not possible to predict the strength of the flow given the uncertain state of world monetary markets, and, finally, there was uncertainty about the ability of domestic financial intermediaries to take up the gap. However, with rapid expansion of the money supply in 1972 the monetary authorities began to take cautious measures to restrict the flow. In September 1972, the minimum term for new financial credits was set at six years. In October, Resolution 289, which premitted renewal of credits of less than one

year, was abolished and a 25% reserve requirement on the cruzeiro counterpart of new financial credits was imposed. These measures apparently did not stem the inflow of external capital and reserves continued to mount, making control of liquidity difficult. During 1973, the Government first extended the minimum maturity to eight years, abolishing the 25% reserve requirement, and subsequently to 10 years, without apparent effect on the inflow. In view of the accumulating reserves the authorities, in early September, imposed a 40% reserve requirement on new financial credits which seems to have slowed down the inflow of financial credits and should facilitate monetary management.

135. The limitation of financial credits raises a potentially serious question about the allocation of credit. Over the past few years financial credits have been a prime source of financing industrial fixed investment and working capital. The annual rate of net inflow from the beginning of 1972 through mid-1973 was equivalent to Cr$15 billion (or 11% of domestic credit outstanding at the end of 1972). Part of this inflow will be replaced by direct foreign investment and, in a strictly quantitative sense, it would be possible to replace the balance by allowing domestic credit to expand. The problem is that expansion of credit from the banking system, finance companies and, to some extent, investment banks, would not necessarily be allocated between consumer and investment credit in the same way as financial credits. This implies that future expansion of longer term credit will have to depend more heavily on the development banking system and on improvement and expansion of the domestic capital market.

Allocation of Domestic Credit

136. There has been a very strong expansion of domestic credit in Brazil since 1969. Total credit outstanding has increased at about 40% per year or from 37.6% of GDP at the end of 1968 to 46.3% at the end of 1973. Furthermore, because of the improvement in the fiscal situation relative allocation of credit to the public sector has declined substantially, from 21.2% of total credit outstanding in 1968 to only 8.6% in 1972. This has made possible an extremely rapid expansion of credit to the private sector, or, since it includes mixed enterprises, the commodity producing sector. The increase exceeds 50% per year and private sector credit outstanding has risen from 29.9% of GDP in 1968 to 52.1% at the end of 1972, reflecting a combination of rapid economic growth and a broadening and deepening of financial intermediation from an extremely debilitated base resulting from past endemic inflation. The introduction of an indexing system that resulted in maintenance of positive interest rates undoubtedly influenced the willingness of individuals to keep savings in the form of financial assets of all kinds, making possible an improvement in the efficiency of the capital market which the expansion of domestic credit reflects. Despite the rapid growth of domestic credit, there has not been a decline in real interest rates and there has been a more than fivefold increase in the cruziero value and of foreign financial credits outstanding. The value of foreign loans outstanding under Law 4131, which are not intermediated by domestic financial institutions, exceeded Cr$20 billion at the end of 1972, or 14% of total domestic credit outstanding, compared with only 3.2 billion or 6.5% of domestic credit at the

end of 1969. While largely a reflection of strong demand, these phenomena are also in part the result of Government intervention in financial markets.

137. The Brazilian financial system is complex, consisting broadly of the following elements:

(a) The Banking System - The Central Bank, commercial banks, and the official Bank of Brazil which generally provide short-term working capital and consumer credit;

(b) The Development Bank System - The National Economic Development Bank (BNDE), nine state development banks, the Bank of the Northeast and the Bank of the Amazon, which concentrate on the financing of economic infrastructure and expansion of capacity in key industries;

(c) The Housing Finance System - The Federal Savings Bank (CEF), state savings banks, the National Housing Bank (BNH), savings and loan associations, and real estate credit companies which provide financing for housing and urbanization programs utilizing resources of the Tenure Guarantee Fund, from the sale of housing bills and individual deposits;

(d) Private Investment Banks - which primarily provide industrial finance principally using external borrowing and by accepting fixed term deposits; and,

(e) Finance Companies - which provide consumer financing with financial resources generated by sale of bills of acceptance.

In addition, there are the two important Government-sponsored forced savings schemes PIS and PASEP.

Table 41: ORIGIN AND DESTINATION OF CREDIT EXTENDED BY THE BANKING SYSTEM

	December (Percent of GDP)				(Prel.)	Percent of Total				
	1968	1969	1970	1971	1972	1968	1969	1970	1971	1972
Total Net Domestic Credit	37.6 1/	37.7	39.8	41.5	46.3	100.0	100.0	100.0	100.0	100.0
Banking System	27.6	26.0	24.6	23.8	22.7	73.3	69.1	61.7	57.4	48.9
National Housing Bank 2/	2.0	2.9	3.7	4.4	5.1	5.3	7.6	9.3	10.6	11.1
Housing Financial System 3/	1.7	2.0	3.0	3.3	4.5	4.6	5.4	7.4	7.9	9.7
Development Banks 4/	1.2	1.2	1.2	0.9	1.1	3.2	3.2	3.2	2.3	2.4
Investment Banks	1.5	2.2	2.9	3.9	5.9	3.9	5.7	7.1	9.4	12.8
Finance Companies	3.6	3.3	4.5	5.1	6.5	9.6	8.9	11.2	12.2	14.1
Social Integration Fund	-	-	-	0.1	0.5	-	-	-	0.3	0.9
Destination						100.0	100.0	100.0	100.0	100.0
Federal Government, Net	6.2	5.2	4.6	3.4	1.8	16.4	13.8	11.5	8.2	4.0
Rest of Public Sector	1.8	1.9	2.1	1.9	2.1	4.8	5.1	5.3	4.6	4.6
Private Sector	29.9	34.0	38.4	43.1	52.1	79.6	90.3	96.5	103.9	112.6
Official Capital and Reserves (-)	-8.6	-10.4	-12.5	-13.8	-15.4	-22.5	-27.6	-31.3	-33.0	-33.3
Other, Net	8.3	6.9	7.2	6.8	5.6	21.9	13.4	18.0	14.5	12.2

	Rate of Increase				First Quarter	
	1969	1970	1971	1972	1972	1973
Total Net Domestic Credit	33.4	38.7	39.7	44.1	5.9	5.0
Banking System	25.8	23.8	29.9	22.8	0.2	-1.5
National Housing Bank	89.4	69.3	59.6	51.5	13.6	9.1
Housing Financial System	58.6	90.7	47.7	78.1	5.3	11.3
Development Banks	33.5	32.3	3.1	52.3	3.0	-10.8
Investment Banks	95.6	73.1	83.1	96.5	18.1	5.8
Finance Companies	22.8	76.3	50.6	67.4	11.5	20.3
Social Integration Fund	-	-	-	339.4	40.9	32.0
Destination						
Federal Government, Net	12.6	15.7	-0.8	-26.2	-8.0	-46.8
Rest of Public Sector	43.0	44.9	19.6	45.6	1.8	-6.3
Private Sector	51.3	48.2	50.5	58.1	7.1	9.2
Official Capital and Reserves	57.2	57.7	38.6	44.9	4.9	2.8
Other, Net	11.3	36.0	27.7	6.7	4.3	-18.5

1/ Excludes state development banks.

2/ Excludes refinancing.

3/ Federal Savings Bank, state savings banks, real estate credit companies, savings and loan associations.

4/ Federal development banks and state development banks.

Source: Central Bank and IMF.

138. The Government attempts to use monetary policy as one of its major tools for influencing production and investment decisions through the channelling of savings into financial intermediaries and attempting to control the allocation of credit by these intermediaries. The Government's influence is, in this sense, very strong since a large part of financial savings is either generated by the Government itself through fiscal operations, or result from Government programs such as the Tenure Guarantee Fund, Social Security, PIS and PASEP. Part of these savings is allocated for credit programs according to Government-established priorities. In addition, the Government has some control over credit allocation by virtue of the fact that some financial intermediaries which attract private voluntary savings are public entities, including the Bank of Brazil and the federal and state savings banks. Finally, the Government establishes interest rate ceilings on both deposits and lending operations and imposes portfolio requirements and differential reserve requirements which influence the allocation of private voluntary savings among financial instruments and the sectoral allocation of credit by intermediaries. Government intervention in financial intermediation results in an imperfect market for credit which is, therefore, not necessarily allocated to sectors where demand is the greatest.

Table 42: FINANCIAL SYSTEM CREDIT TO THE COMMODITY PRODUCING SECTOR, 1969 AND 1972

	Percent of Total		Percent of Increase
	1969	June 1973	
Banking System	58.2	45.4	41.7
Housing Finance System	14.3	19.1	20.5
Investment Banks	7.7	11.6	12.8
Finance Companies	10.5	14.2	15.3
Development Banks	9.3	7.7	7.3
PIS	-	0.9	1.2
PASEP	-	1.0	1.2
	100.0	100.0	100.0

Source: Central Bank.

139. Substantial amounts of financial savings are channelled into subsidized agricultural credit (through the Bank of Brazil, the BNB and partly because of portfolio requirements, commercial banks) and into housing (through the BNH). In a more freely functioning financial market these resources might have been channelled into industrial and commercial credit. While there is no evidence of unsatisfied demand for agricultural credit (at nominal rates ranging from 7.5 to 17.6% per annum, or housing credit (at rates ranging from 13 to 22%), rates for industrial and commercial credit range from 18 to 31%

(and possibly higher if additional fees and charges are added or compensating balances required). This form of subsidization of housing and agriculture is in part responsible for the high domestic interest rates for industrial and commercial credits which has led to the heavy utilization of external sources of financing. Moreover, it is far more difficult for smaller firms to obtain financing in the domestic market than for larger firms and this situation will become more acute as access of larger firms to external credit sources is reduced.

140. The Government is attempting to create an alternative to external financing of industrial investment by providing additional incentives for the recuperation of the stock market and for the establishment of a domestic debenture market. These incentives are supposed to result in an increase in saving and a reallocation of financial savings from other assets to the debenture market and the stock market. In addition, the authorities might consider giving additional impetus to the development banking system, which is playing a relatively smaller role in providing guidelines for investment financing by PIS. While resources of PIS are increasing rapidly, the Government has not defined the role it wishes the agency to play. At present it is channelling most of its funds through the Federal Savings Bank (CEF) to investment banks. CEF has limited project appraisal capacity and PIS is, therefore, functioning neither as a development bank nor strictly as a conduit for channelling funds to the investment banks. The Government may find it desirable to limit the flow of saving into the financing of consumer expenditures. This type of financing which largely supports purchase of automobiles, has absorbed 15% of the total expansion of credit since 1969. The expansion of finance company credit is a result of the extremely high demand for consumer durables and the fact that interest rates on bills of acceptance are not controlled. Development of the automobile industry, which is the main beneficiary of this type of financing, has high governmental priority. However, in view of the present capacity limitations of the industry and a possible difficult fuel situation, the Government might consider measures such as increased taxes on interest earned on bills of acceptance or a hardening of terms on consumer purchases to reduce the flow of financial savings into this market. Finally, if the domestic capital market does not take up the slack caused by limitation of financial credits and domestic credit becomes too tight, the Government may have to relax its restrictions on external financing.

Table 43: STRUCTURE OF INTEREST RATES, 1973

Rates to Borrowers

1. Commercial Banks 1/	
Production and Marketing	
Up to 60 days	17.3
Over 60 days	18.3
Chattel Loans	23.9
Personal Loans	32.9
Medium and Small Enterprises	19.7
Rural Credit 2/	
Less than One Year	
Ordinary	17.6
Cooperatives and Small Loans	14.9
Over One Year	
Ordinary	15.5
Cooperatives	13.3
Small Loans	13.7
Loans for Modern Inputs	7.5
2. Investment Banks	
Maximum Excluding Monetary Correction	8.0
Nominal Maximum Rate Including Monetary Correction	29.0
3. Finance Companies	
Prevailing Rates Including Monetary Correction	37.0
4. Housing Banks	
Prevailing Rates Excluding Monetary Correction	1.0-10.0
5. PIS and PASEP	
Maximum Rate Excluding Monetary Correction	9.0
6. National Development Bank	
Rates Excluding Monetary Correction	4.0-12.0

Rates to Depositors or Investors

1. Demand Deposits	-
2. Time Deposits Including Monetary Correction 3/	21.0
3. Time Deposits not Including Monetary Correction 3/	9.0
4. Deposits in Savings and Loan Associations 4/	6.0
5. Bills of Acceptance 3/	22.0-23.0
6. Treasury Bills	16.1

1/ The 60-day rates have been calculated as charged in advance and compounded for six periods. Rates for loans over 60 days calculated as paid quarterly in advance and compounded for four periods. Personal loan rates have been calculated as paid monthly in advance and compounded for 12 periods. In addition, banks require compensating balances of 20-30%.

2/ Calculated as paid in advance.

3/ Interest earned on bills of acceptance subject to 12% income tax withholding.

4/ Monetary correction paid quarterly.

141. The Government may wish to take special measures to improve the flow of long-term credit to small and medium size firms. The commercial banking system would seem to be the best vehicle for reaching very small firms, i.e., those with less than 20 employees. In lending to these firms loan appraisal is often ultimately reduced to an evaluation of the entrepreneurial capability of the owner-manager, a judgment a commercial bank manager is usually best equipped to make. Moreover, commercial banks have networks of branches and their staffs are well acquainted with local conditions. The Brazilian authorities are aware of the problems smaller industrial firms have in obtaining financing. The approaches being considered by the Ministry of Planning to ameliorate the situation include: (a) loan guarantee schemes designed to overcome often-encountered problems of insufficient collateral and other guarantees; (b) a technical assistance program designed to provide aid in production management, marketing and financial administration, and (c) a program of subsidized project preparation to reduce the high cost to the firm of preparing loan applications (technical service firms generally charge a fixed fee plus 3 to 8% of financing requested). It should be possible to design a program combining all these elements under the aegis of a government agency with characteristics similar to the U.S. Small Business Administration. A small business loan guarantee program should probably take the form of an insurance fund with premiums based on the expected default rate of loans guaranteed. An increased flow of resources from the BNDE might be an appropriate solution for assisting somewhat larger firms, which are now eligible for financing from the Fund for Financing of Small and Medium Enterprises (FIPEME) of the BNDE, i.e., have fixed capital of less than Cr$30 million. Such financing might be channelled through the State Development Banks, which have broad geographical coverage and are development oriented. It would, however, be necessary to upgrade their project appraisal capabilities substantially in order for them to play a major role. The interest rate to the firm on FIPEME operations, currently 4% plus monetary correction, is subsidized. This encourages larger firms which might be obtaining financing from PIS or even investment banks to attempt to obtain FIPEME financing. Equalization of PIS and FIPEME interest rates to the final borrower at the present PIS rate, 9% would allow smaller firms greater access to FIPEME funds.

IV. BALANCE OF PAYMENTS AND GROWTH PROSPECTS

A. Recent Performance

142. The performance of the external sector in 1973 was extremely impressive; the achievements in that year exceed by far those of any year since 1967. For the first time since 1970 Brazil achieved a trade surplus; the deficit on current account actually declined; private foreign investment increased threefold; the debt structure underwent considerable improvement; the capacity to import further strengthened as terms of trade continued to be favorable; and an additional 2 billion dollars in foreign exchange reserves were accumulated partly offsetting a US$3 billion increase in total debt outstanding.

143. Merchandise exports, which increased by 37% in 1972 grew by over 55% in 1973 to US$6,198 million, thus outstripping a 43% growth in merchandise imports to US$6,075 million and registering a trade surplus of US$123 million. This compares to trade deficits of US$341 and US$244 million in 1971 and 1972, respectively. The negative balance of the services accounts increased further, though the growth in 1973, 16.6% was considerably lower than the 28.9% increase in 1972, reflecting both import substitution in non-factor services through the use of Brazilian shipping and insurance companies and the effect of interest earnings on foreign exchange reserves. As a result of the shift in the trade balance from negative to positive and the slower growth of the services deficit current account deficit declined from US$1,489 million in 1972 to US$1,307 million in 1973. Direct foreign investment, which played a relatively minor role until 1972 having financed only 17% of the deficit over the 1967-71 period, increased threefold and was equivalent to 72% of the current account deficit in 1973. The rapid increase in direct investment was apparently induced by the lengthening of minimum maturities on financial credits. Other capital inflows including financial credits and net disbursements on medium- and long-term loans far exceeded the current account deficit, resulting in a substantial further accumulation of foreign exchange reserves.

Table 44: SUMMARY BALANCE OF PAYMENTS, 1970-73

(US$ million)

	1970	1971	1972	1973
Trade Balance	232	-341	-244	123
Merchandise Exports	2,739	2,904	3,991	6,198
Merchandise Imports	-2,507	-3,245	-4,235	-6,075
Service (Net) 1/	-794	-966	-1,245	-1,430
Balance on Current Account	-562	-1,307	-1,489	-1,307
Direct Foreign Investment	132	168	318	941
Medium and Long Term Loans (Net)	137	394	574	825
Financial Credit (Net)	627	801	2,536	1,850
Other Capital (Net) 2/	184	504	626	-172
Change in Reserves (- = Increase)	-518	-560	-2,565	-2,137

/1 Includes transfers.

/2 Includes SDR's Brazilian loans to the rest of the world, errors and omissions, and short-term capital.

Source: Statistical Appendix, Table 3.1.

Table 45: EXPORTS, GROWTH RATES AND CONTRIBUTION TO GROWTH, 1967-73

(Volume in '000 metric tons, Value in US$ million, Unit Price in US$/ton)

	1967	1971	1972	1973	%age Increase 1971-72	%age Increase 1972-73	Rate of Increase 1967-73	Composition 1967	Composition 1973	Contribution to Growth 1967-73
1. Coffee	733	822	1,057	1,343	28.6	27.1	10.6	44.3	21.7	13.4
Beans										
Volume ('000 60 kg. bags)	16,738	17,238	17,502	17,865	1.5	2.1				
Price (US$/bag)	42	45	55	70	22.2	27.3				
Value	705	772	989	1,243	37.0	25.7	9.9	42.6	20.1	11.8
Soluble Coffee (value only)	28	50	68	100	36.0	47.1	23.0	1.7	1.6	1.6
2. Agriculture and Raw Materials	426	926	1,461	2,517	57.8	72.3	35.0	25.8	40.6	46.0
Cotton										
Volume	189	227	284	283	25.1	16.2				
Price	480	605	664	770	9.8	16.0				
Value	91	137	189	218	38.0	15.3	15.7	5.5	3.5	2.8
Cocoa Beans										
Volume	114	119	102	83	-14.3	-19.6				
Price	517	518	579	1,069	11.8	84.6				
Value	59	62	59	89	-4.8	50.8	7.1	3.6	1.4	0.7
Sugar										
Volume	1,001	1,191	2,054	2,880	72.5	40.2				
Price	80	123	153	192	24.4	25.5				
Value	80	147	314	553	113.6	76.1	38.0	4.8	8.9	10.4
Soybeans										
Volume	305	213	1,037	1,544	386.6	48.9				
Price	96	114	123	281	7.9	128.5				
Value	29	24	128	433	433.3	238.3	62.5	1.8	7.0	8.9
Soy Meal and Cake										
Volume	125	911	1,405	1,823	54.2	29.8				
Price	82	89	108	266	21.3	146.3				
Value	10	82	152	484	83.4	218.4	90.0	0.6	7.8	10.4
Other (value only)	157	474	619	740	30.6	19.5	29.5	9.5	11.9	12.8
3. Minerals	131	290	274	407	-5.5	48.5	21.0	7.9	6.6	6.1
Iron										
Volume	14,279	31,020	30,512	44,963	-1.6	47.4				
Price	7.20	7.65	7.59	8.07	-0.1	6.3				
Value	103	237	232	363	-0.2	56.5	23.0	6.2	5.9	5.7
Manganese										
Volume	542	1,797	1,175	788	-34.6	-32.9				
Price	25	21	23	24	9.5	4.3				
Value	14	38	27	19	-28.9	-29.6	5.2	0.8	0.3	0.1
Other (value only)	14	15	15	25	0.0	66.7	10.2	0.9	0.4	0.2
4. Semi-processed and Manufactured	341	772	1,154	1,841	49.5	59.5	32.0	20.6	29.7	33.0
Semi-processed	139	241	310	475	28.6	53.2	22.2	8.4	7.7	7.4
Manufactured	202	531	844	1,366	58.9	61.8	38.0	12.2	22.0	25.6
5. Other	23	94	45	90	-52.1	100.0	25.5	1.4	1.4	1.5
TOTAL MERCHANDISE EXPORTS	1,654	2,904	3,991	6,198	37.4	55.3	25.0	100.0	100.0	100.0

Source: CACEX and Appendix Table 3.3

Exports

144. Although a significant portion of the 55% increase in dollar value of merchandise exports in 1973 can be attributed to the rising world commodity prices, on an overall basis about 45% of the increase in merchandise exports has been due to increased volume and 55% to increased prices. Brazil has achieved significant increases in the export volumes of primary goods such as sugar, soybeans and meal, and iron ore and has accelerated the already rapid increase in the export of semi-processed and manufactured products which began in the late 1960s. As a result, there has been a strong diversification of exports and consequently a reduction in the vulnerability of export earnings.

145. Coffee earnings in 1973 increased by 27.1% despite only a 2% increase in the volume of coffee bean exports. World coffee prices, which had been increasing since early 1972 when producing countries agreed to limit supplies to the international market, were further strengthened by the July 1972 frost in Parana. The New York spot price for Santos 4 coffee jumped from 44.68¢/lb in January 1972 to 58.88¢/lb in August 1972. The 15 million bag level of production preliminarily forecast for the 1973/74 harvest would mark the eight consecutive crop below combined requirements for the domestic and export market of 26 million bags. It will also be 7 million bags below estimated present production capacity of 22 million bags for existing plantations. Export requirements for 1973 could only be fulfilled by supplementing production with a drawdown of existing IBC stocks and a small amount of imports. The tight balance between world supply and demand resulting from low Brazilian output and stocks has exerted further upward pressure on world prices. The New York spot price, after declining slightly in September and October of 1972, has been increasing steadily since then and had reached 67.10¢/lb by June 1973.

146. Export earnings from agricultural exports other than coffee increased by 72.3% in 1973. About 80% of the increase in export earnings from this group of commodities was attributable to increases in world prices, reflecting developments in the world economy. The rapid general increase in the world prices during 1972-73 was most pronounced in the primary goods, including agricultural commodities, as shortfalls in production supply increases for many commodities did not fully match increases in world demand. Upward price movements were further accentuated by efforts to replenish or increase inventories and also, to some extent, by speculative hedging in the face of monetary uncertainty. Export growth of this group of commodities was led by sugar and soybeans and meal, which combined account for almost 30% of total export growth between 1967 and 1973. The gradual decline in Cuba's sugar production since 1970, coupled with increasing output in Brazil, has made Brazil the largest canesugar producer in the world. Sugar exports in 1973 totalled 2.9 million tons compared to 1.2 million tons in 1971, an increase of 142% and in terms of value, sugar exports have increased by 276% over the same period. The recent world shortage of soybeans, coupled with US embargo on its exports in June 1973, has made many importing countries, especially Japan, look toward Brazil as a potential source of supply. Soybeans and soybean cake and meal

are now the second most important foreign exchange earner, second only to coffee. Export earnings from this crop, US$917 million in 1973, represent an increase of 228% over those of the preceding year.

147. While some other traditional agriculture commodity exports like cotton, cocoa and tobacco performed considerably better in 1973 than in 1972, the export performance of some of the non-traditional commodities like beef and corn was restrained by competition from domestic demand. Corn production fell for the second year in a row because of competition from soybean plantings and exports had to be curtailed to assure sufficient supply for domestic livestock feed. The Government, through multiple changes in export quotas and storage requirements and in ranchgate, wholesale and retail price policy made during the year, limited beef exports in 1973 to assure supplies for the domestic market and stem domestic price increases. As a result, beef exports (chilled and frozen) registered a decline of 15% in value even though world beef prices increased by more than 38%.

148. Iron ore is the major Brazilian mineral export, followed by manganese. Only since 1969 has Brazil, which is very well endowed with mineral resources, been able to exploit its mineral resources for export with any consistency. Exchange earnings from iron ore increased by almost 57% in 1973, mainly on the strength of a 47% increase in volume. Semi-processed and manufactured exports continued their rapid growth during 1973, increasing by 60% and surpassing the 50% increase achieved in 1972.

149. While in terms of growth rates, manufactured exports, which have grown by 38% per year over 1967-73 have performed more spectacularly, diversification of agricultural exports has been more important from the standpoint of export earnings. Increased exports of agricultural products other than coffee account for 46% of total export growth over 1967-73, while increased exports of manufactured products account for 25.6%. The diversification of agricultural exports is all the more remarkable since, unlike manufactures, they benefit little from fiscal incentives. The most impressive accomplishment of Brazilian agriculture is the speed at which new products have been added to the export flow. Soybeans and meal is the most startling example of this as exports increased from US$39 million in 1967 to US$917 million in 1973. While in 1967 coffee was the only agricultural commodity which earned more than US$100 million, in 1973 cotton, sugar, beef and soybeans did as well. The broadness and diversity of the export drive can be seen in the behavior of the "other" agricultural export category which increased by 29.5% per year. After accounting for the major commodities in this group (seafood, horsemeat, nuts, bananas, crude oils, sisal, paper, cottonseed and hides), there was still a residual of US$219 million in 1973 for which no breakdown was available. A similar situation exists in manufactured exports where, after accounting for the major export groups (footwear, machinery and equipment, iron and steel products, transport material, textiles, chemicals, glass wood veneers and vegetable and fruit juices) there was a residual "other category" of US$472 million, compared to only US$131 million in 1970.

Table 46: PRICE EFFECT ON EXPORT GROWTH OF MAJOR PRIMARY COMMODITIES, 1973

(US$ million)

	Value (Million US$) 1972	1973	Increase in Value (%)	Increase in Value due to Prices Alone (%)
Coffee Beans	989	1,243	25.7	23.2
Cotton	189	218	15.3	15.9
Cocoa	59	89	50.8	84.7
Sugar	314	553	76.1	25.5
Beef	169	144	-14.8	39.0
Soybean	128	433	238.3	127.3
Soycake and Meal	152	484	218.4	146.0
Tobacco	47	58	23.4	4.3
Iron Ore	232	363	56.5	6.0
Sub-total	2,279	3,585	57.3	37.6
Total Exports	3,991	6,198	55.3	30.1

Source: Statistical Appendix, Table 3.3.

Imports

150. Rapid increase in output and incomes since mid-1967 has resulted in a substantial rise in demand for imported goods, especially intermediate goods and raw materials, and capital goods. The ratio of imports to GDP has risen from 6.9% in 1967 to 11.7% in 1973. Merchandise imports rose by 43% in 1973, strongly influenced by lags in domestic production of raw materials and intermediate goods as well as capital goods. The poor wheat crop of 1972, coupled with soaring world wheat prices, has produced a 174% increase in the value of wheat imports which alone accounted for almost 12% of the increase in imports in 1973. Imports of raw materials and intermediate goods increased by more than one-third in 1973 led by crude petroleum, petrochemicals and steel products, while capital goods imports also registered a 48% growth in value in 1973.

151. The share of consumer imports in total imports has been gradually declining since 1967, while the share of intermediate goods has been gradually increasing. The share of capital imports declined somewhat in 1971 compared to 1970 and it was thought that import substitution of capital goods in this category would continue in subsequent years. However, over the last two years gross fixed investment increased at an annual average of 20% in constant terms,

and domestic production of capital goods has not been able to meet this demand. This excess demand had to be filled in by imports with the result that capital goods imports increased from 38% of total imports in 1971 to 43% in 1973. The behavior of capital goods imports seems very sensitive to small variations in GDP and investment growth rates. It is possible that, because of the behavior of capital goods imports, at very high rates of growth of aggregate demand marginal overall import requirements are much higher than the ratio of imports to GDP so that relatively small increases or decreases in GDP or consumption produce larger variations in import growth.

Table 47: BEHAVIOR COMMODITY IMPORTS, 1967-73

	Percent Share			Growth Rate	Contribution
	1967	1972	1973	1967-73	to Growth
Consumer Goods	23.3	14.8	14.8	18.5	12.1
(Wheat)	(10.6)	(2.9)	(5.5)	(13.9)	(3.9)
Intermediate and Raw Materials	39.8	42.9	41.4	28.0	41.9
(Crude Petroleum)	(7.7)	(8.1)	(9.5)	(32.0)	(10.1)
(Chemicals)	(15.0)	(14.5)	(14.0)	(25.5)	(13.7)
(Metals)	(9.1)	(10.9)	(11.1)	(32.0)	(11.7)
Capital Goods	35.7	41.3	42.8	31.0	45.0
(Machinery and Equipment)	(26.8)	(33.0)	(34.7)	(32.5)	(37.2)
Others	1.1	1.0	1.0	34.9	1.0
Total Imports	100.0	100.0	100.0	27.2	100.0

Source: Statistical Appendix, Table 3.4.

152. The rapid growth of exports is at least in part attributable to the Government's efforts at export promotion and diversification as embodied in a policy of strong fiscal incentives and a system of periodically devaluing the cruzeiro on a "crawling peg" basis to compensate for increases in the domestic price level relative to world prices adopted in 1968. These policies were designed to offset the impact of the protective system on potential exporters and to compensate for overvaluation of the exchange rate which may have accumulated before 1968. The crawling peg system prevents the cruzeiro from becoming overvalued because of domestic inflation, which would negate

Table 48 : CRUZEIRO DEVALUATION VIS-A-VIS OTHER CURRENCIES

Trading Partner	1972 Weight in Total Trade	Relative Exchange Rates 1/		Value of Trade With Relative Exchange Rates		Cruzeiro Devaluation Vis-a-Vis National Currencies 2/	
		June 73/ December 72	June 73/ December 71	June 73/ December 72	June 73/ December 71	June 73/ December 72	June 73/ December 71
(1)	(2)	(3)		(4)		(5)	
Canada	1.85	1.008	.989	1.86	1.83	-0.8	1.1
Germany	12.10	.809	.738	9.79	8.93	19.1	26.2
Italy	5.35	1.027	.977	5.49	5.23	-2.7	2.3
Japan	7.70	.860	.754	6.62	5.80	14.0	24.6
Netherland	3.40	.850	.780	2.89	2.65	15.0	22.0
Spain	2.75	.897	.829	2.47	2.28	10.3	17.1
Sweden	2.10	.885	.824	1.86	1.73	11.5	17.6
Switzerland	1.75	.799	.742	1.40	1.30	20.1	25.8
United Kingdom	5.05	.908	.987	4.58	4.98	9.2	1.3
SUBTOTAL	42.05			36.96	34.73	12.1	17.4
United States	27.05			27.55	24.82	-1.85	8.25
TOTAL	69.10			64.51	59.55	6.6	13.8
Other	30.90						
TOTAL TRADE	100.00						

1/ Ratio of terminal year to base year of the exchange rates of Brazil's trading partners to US$.
2/ Depreciation in 1972 weights (Column 2) using relative exchange rates (Column 3). ((-) sign signifies revaluation of the currency.)

Source: Central Bank, International Financial Statistics.

the effects of export incentives, and gives Brazilian entrepreneurs a more predictable planning horizon, facilitating decision making for investment in export-oriented activities.

153. The recent changes in the international monetary system seem to have aided Brazil, insofar as they have made Brazilian goods even more competitive in the European and Japanese markets. While the Cruzeiro is pegged to the dollar, the U.S. accounts for only 30% of its trade. By devaluing against the dollar while the dollar is being depreciated against European and Japanese currencies, Brazil is increasing its competitiveness in these markets. For example, while the cruzeiro has depreciated by 8.2% with respect to the dollar between 1971 and June 1973, devaluation with respect to other currencies, based on trade weights, was 17.4%. In real terms, since inflation in the rest of the world exceeds that of the U.S., the effective rate of devaluation of the cruzeiro vis-a-vis Europe and Japan has been relatively greater than the nominal devaluation. This may account for a small but noticeable shift in Brazil's exports from the U.S. to the EEC and Japan. On the other hand, recent strengthening of the dollar on world markets also strengthen the cruzeiro and this should be taken into consideration in planning future exchange rate actions.

Terms of Trade

154. Brazil has benefited substantially from the fact that the prices of its export products have increased more rapidly than import prices. Since 1967 export prices have increased by 66.5% or 10.7% per year while import prices have increased only 29.6% or 5.3% per year. Terms of trade continued to strengthen through 1973, despite a doubling of wheat prices and a substantial rise in the price of crude petroleum. Favorable evolution of the terms of trade has made a significant contribution to Brazil's capacity to import as an average unit of exports in 1973 would purchase 28.5% more in terms of imports than it did in 1968. Future developments in relative prices of traded goods, especially petroleum, will have an important bearing on the ability to sustain rapid rates of economic growth.

Table 49: EXPORT AND IMPORT PRICE MOVEMENT, 1968-73

	1968	1969	1970	1971	1972	1973
Export Price Index	100.0	104.6	120.9	118.3	128.7	166.5
Import Price Index	100.0	98.1	100.0	103.5	108.7	129.6
Terms of Trade Index	100.0	106.6	120.9	114.3	118.4	128.5

Source: FGV and Mission estimates.

Table 50: BALANCE OF PAYMENTS: SERVICES ACCOUNTS, 1967-73

(Million US$)

	1967	1972	(Estimated) 1973
Non-Factor Services, Net	-228	-689	-804
Payments	-363	-970	-1,183
Receipts	135	281	379
Factor Income, Net	-299	-561	-654
Interest	-184	-359	-434
Payments	(-202)	(-489)	(-834)
Receipts	(18)	(130)	(400)
Other, Net	-115	-202	-220
Net Services Balance	-527	-1,250	-1,458

Source: Appendix Table 3.1

Service Accounts

155. The deficit on Brazil's service account has increased from US$527 million in 1967 to US$1,458 million in 1973, imposing a heavy burden on export earnings. The deficit on non-factor services account increased somewhat more rapidly than total trade between 1967 and 1972. This reflects increased international travel rather than increased use of foreign shipping and insurance. In fact, there is clear evidence that the share of shipping and insurance accounted for by Brazilian enterprises has increased. Nevertheless, the Government has been trying to reduce the non-factor services deficit through a program of investment in the shipping industry as well as through negotiations with various freight conferences aimed at increasing the participation of Brazilian bottoms in the shipment of both exports and imports. Internal institutional reforms which transformed the state shipping company, Lloyd Brasileiro, into mixed enterprise and encouraged the growth of private companies also has improved Brazil's ocean transport capability. Finally, the Government's fiscal incentives for manufactured exports are designed to encourage exporters to use Brazilian bottoms and to insure their goods with Brazilian rather than foreign insurance companies.

156. Net interest payments have increased at a lower rate than might have been expected, given the accumulation of external debt, because of interest receipts on foreign exchange reserves. This was an especially important factor in 1973 when interest receipts totalled US$400 million. Since these receipts were earned on foreign exchange reserves accumulated because of the inflow of financial credits, they should be deducted from

the US$554 million interest payments on financial credits in 1973 in determining the net cost of this external borrowing in balance of payments terms. While gross interest payments on financial credits during 1973 were equivalent to 10.0% of debt outstanding at the end of 1972, interest earnings on reserves brought the interest cost down to 2.8%.

Capital Account

157. Brazil incurred increasing deficits on current accounts ever since imports were liberalized and the country started on the path of rapid growth. External loan capital was needed not only to finance these increasing current account deficits but also for meeting the substantial obligations for amortizing the compensatory debt incurred in the debt rescheduling of 1964. While during 1969-71 direct investment and medium- and long-term borrowings combined were not sufficient to provide for even one-half of the capital required in recent years, the inflow of financial credits has been so strong that they not only have financed the residual capital requirements but also enabled the country to accumulate large amounts of foreign reserves. However, the very nature and terms of the financial credits have been responsible for the very large loan repayments that fall due every year. Total debt service as a percent of exports of goods and non-factor services was as high as 43.4% in 1971. With the very strong export performance in 1972 and 1973, and the recent measures the Government has adopted with respect to the flow of financial credits, the debt service ratio has declined. The pace of borrowings since 1967 has led to a considerable increase in foreign indebtedness and total external debt (outstanding and disbursed) has tripled since 1968. Financial credits have increased at an annual average of 45% while medium- and long-term debt has increased at an annual rate of 10.3% for the 1968-73 period.

Table 51: CAPITAL REQUIREMENTS AND THEIR FINANCING, 1969-73

(US$ million)

	1969-71 Average	1972	1973
1. Deficit on Current Account	717	1,489	1,307
2. Amortization	912	1,376	1,938
A. Capital Required (= 1 + 2)	1,629	2,865	3,245
3. Direct Foreign Investment	159	318	941
4. Medium- and Long-Term Capital	611	1,099	1,461
International and Government Agencies	(345)	(437)	(n.a.)
Suppliers	(266)	(602)	(n.a.)
Others	(-)	(60)	(n.a.)
5. Financial Credits	1,132	3,396	3,152
6. Others	291	617	-172
B. Capital inflow (= 3 + 4 + 5 + 6)	2,193	5,430	5,328
C. Surplus (B - A)	564	2,565	2,137

Source: Statistical Appendix, Table 3.1.

158. International and multilateral agencies have traditionally provided a very small proportion of total capital requirements, though in recent years their share has been increasing. Suppliers' credits, on the other hand, do finance about one-third of the cost of Brazil's capital goods imports. The year 1973 witnessed substantial improvements in the structure of Brazil's external debt as a result of the stern measures taken by the authorities to restrict the inflow of financial credits. Direct foreign investment increased almost threefold and, for the first time, capital inflows from international agencies, suppliers, bilateral lenders and foreign direct investment were sufficient to finance the current account deficit without financial credits. The fact that the accumulation of foreign exchange during 1972-73, US$4,702 million, was greater than the net inflow of financial credits, US$4,386 million, indicates that financial credits were not necessary to permit substitution of foreign saving for domestic saving but instead permitted substitution of foreign credit for domestic credit.

159. The measures taken by the authorities to restrict the inflow of financial credits were outlined in Chapter III. The Government hoped that the 40% reserve requirement on the cruzeiro counterpart of new financial credits coupled with a 10-year minimum term would be sufficient to bring the net inflow down to zero in the second half of 1973, after a net inflow of US$1,299 and reserve accumulation of US$1,847 million in the first half of the year. However, indications are that, partly because of the exemption of public enterprises and some state governments from these restrictions, there was a small further inflow and reserve accumulation in the second half of 1973, so that the year-end level of reserves approached US$6.7 billion. Besides ultimately stemming the rate of reserve accumulation and facilitating monetary management, lengthening of minimum maturity requirements on financial credits and abolishing Article 289, thus liquidating about US$600 million in short-term debt, has had a salutary effect on the debt structure. Whereas at the end of the first quarter of 1972, 40% of debt outstanding was due within two years, at the end of the first quarter of 1973 only 31% was due in the first two years. An even more significant improvement must have taken place in the rest of 1973.

161. Despite the large increase in the level of indebtedness during 1972-73, Brazil's external liquidity profile at the end of 1973 was better by every criterion than at the end of 1967. The debt service ratio has been declining since 1971 and the reserve level in terms of number of months of imports has been increasing since the late 60's. Although total financial credits increased from 35.1% of debt outstanding in 1969 to 61.8% in 1973, control of the terms of these credits has prevented the overall debt service ratio from increasing further. In addition, the level of reserves is now equivalent to 87% of total financial credits outstanding and thus providing a significant cushion of liquidity against a potential net outflow of these credits.

162. Brazil's high level of reserves, US$6.7 billion, should be taken into account in appraising Brazil's external liquidity. Defining excess reserves as that in excess of the amount generally considered adequate to cushion the impact of unexpected fluctuations in exports and imports, and adding this to the exchange earnings from exports, would give a more accurate picture of the external liquidity situation. Taking that portion of the reserves total exceeding the equivalent of three months' imports and adding these to export earnings would result in a total debt service ratio of 20.6% in 1973 compared to 36.1% if only export earnings are used as a measure to define Brazil's external liquidity. This liquidity measure has improved very substantially since 1969, indicating that, despite the intervening very rapid accumulation of external debt, Brazil was actually in a more liquid external position in 1973 than it had been at the outset of its recent rapid growth period.

C. Growth Prospects, 1974-79

163. The most outstanding characteristic of the recent growth of the Brazilian economy has been the resurgence of the external sector and the vital role that has been played by both trade and capital flows in the development process. Brazil has become more closely integrated into the world economy than, perhaps, at any time in its recent history and has, in fact, greatly benefited from this. At the same time, however, its economic growth has become more dependent upon and vulnerable to changes in the world economic situation. Recent sharp increases in world petroleum prices have cast a cloud of uncertainty over the course of the world economy over at least the next few years and, because of the dependence of Brazilian growth on the progress of the world economy, the country's development prospects are less clear than at any time since 1968.

164. The increases in crude petroleum prices will have strong direct and indirect consequences for Brazil, which has become increasingly dependent upon oil imports and is now the largest oil importer of the developing nations. Domestic crude oil production in 1972 was only 15% higher than in 1967. While this would imply a growth rate of 2.8% per year, production actually increased fairly rapidly from 1967 to 1969, when it peaked at 8.5 million tons, and has

stagnated since, despite considerable efforts by PETROBRAS to expand productive capacity. Consumption, on the other hand, spurred by rapid increases in the number of motor vehicles on the road and by industrial expansion, has increased by 12% per year since 1967. 1/ As a result, all of the increase in petroleum consumption since 1969 has come from imports, which have risen by 17% per year. It should be pointed out, however, that increases in crude oil imports have been accompanied by reduced imports of petroleum products as domestic refining capacity expanded. Whereas domestic production supplied 40% of petroleum requirements in 1967, its share was down to 27% in 1972.

165. It is estimated that Brazil imported 230 million bbl of crude oil in 1973 at an average cost of US$2.52 per bbl, country of origin, or US$3.60 delivered, requiring an expenditure of foreign exchange of US$580 million f.o.b. or US$828 million c.i.f. In addition, about US$105 million in petroleum derivates were imported. Including estimated transport costs on derivates, the petroleum import bill probably reached US$1 billion. It is estimated that the price of crude oil will average at least US$10.80 per bbl in 1974, more than four times the 1973 level, and that there will be an increase of a similar magnitude in the price of petroleum derivates. In the near term, the increase in Brazil's import bill resulting from the rise in external petroleum prices will depend on the policy adopted by the Government on pricing of domestic petroleum products, especially gasoline, the price elasticity of demand (or alternatively on direct limitation of consumption through rationing or other means) and the growth rate of the economy. Over the longer term petroleum import requirements will depend on evolution of domestic crude oil production; development of alternative energy sources (hydroelectric power, atomic power and shale oil production); transport sector development strategy, the key elements of which are gasoline pricing, railway tariffs and infrastructure construction programs; and the long-term growth of the economy and its sectoral composition.

1/ Use of petroleum for production of electricity has increased very slowly as thermal generation rose 3.2% per year over 1967-72.

Table 54: CONSUMPTION OF PRIMARY ENERGY IN CRUDE OIL EQUIVALENTS

('000 t crude oil equivalent)

	Volume			Composition (%)			Rate of Increase (%)	
	1960	1967	1972	1960	1967	1972	1962-67	1967-72
Domestic Coal	715	1,096	1,373	1.9	2.0	1.9	6.3	4.6
Imported Coal	640	1,043	1,170	1.7	1.9	1.7	7.2	2.3
Natural Gas	54	120	233	0.1	0.2	0.3	12.1	14.2
Petroleum Derivatives	14,206	21,228	31,854	37.6	39.4	44.8	5.9	8.5
Other Fuels /1	16,883	21,994	21,687	44.6	40.8	30.5	2.8	-0.3
Hydroelectric Energy	5,331	8,465	14,761	14.1	15.7	20.8	6.8	11.8
Total	37,829	53,946	71,078	100.0	100.0	100.0	5.2	5.7

/1 Wood, bagasse and charcoal.

Source: Brazilian National Committee of the World Energy Conference, Brazilian Energy Statistics.

Table 55: PRODUCTION AND IMPORTS OF CRUDE PETROLEUM, 1960-72

	Production ('000 tons)	Imports ('000 tons)	Apparent Consumption	Percent Imported
1960	3,908	5,632	9,540	59.0
1967	7,162	10,559	17,721	59.6
1972	8,236	22,941	31,177	73.6
Increase (%)				
1960-67	9.0	9.4	9.3	
1967-72	2.8	16.8	12.0	

Source: Brazilian National Committee of the World Energy Conference, Brazilian Energy Statistics, Central Bank.

166. The indirect effects on Brazil of oil price increases may be as important as the direct and more nearly measurable impact on the balance of payments. A slowdown in the rate of growth of the world economy induced by the sharp increase in petroleum prices and restricted energy supplies would have an adverse impact on the prospects for Brazil's exports, especially of manufactured goods. In addition, escalation of world inflation would have an effect on Brazil's terms of trade, although it is not clear at this juncture what the net effect would be. Finally, disruption of world capital markets resulting from the strong flow of financial resources from oil importing to oil exporting countries could affect capital flows to Brazil, whether in the form of loans or direct foreign investment.

D. Export Prospects

167. Examination of prospects for domestic production and the probable evolution of world markets for Brazil's agricultural exports indicates that because of a combination of factors it is unlikely that the high rate of growth of export earnings from this group of commodities will be sustained. First, analysis of the probable future world supply of and demand for key agricultural exports indicates that recent rapid price increases cannot be expected to continue. In most cases increase in prices in current terms can be expected but in all cases price increases will be below the level of world inflation so that, in real terms, prices will decline from their 1973 peaks. It is not yet clear what effect Brazilian attempts to increase world coffee prices will have. Second, market prospects for some important commodities are limited by slowly increasing world demand. This is an especially important factor in the case of coffee. Prospects for sugar are, however, somewhat less clear because of uncertainties about the future development of Cuban production and Eastern European demand which have played an important role in recent increases in Brazilian sugar exports. Third, export prospects for some commodities are likely to be constrained by rapid growth of domestic demand, as in the case of beef and, to a lesser extent, corn and cotton. Finally, in the case of coffee, constraints on domestic production make it unlikely that Brazil will be able to maintain its share of world markets over 1974-79. If a growth rate of 22% can be sustained for minor agricultural commodities, exports of agricultural products other than coffee would increase at 14.4% per year, while coffee exports are projected to grow by 11.0% annually. This would bring total agricultural exports to US$8,147 million in 1979, compared with US$3,860 million in 1973, implying an overall growth of 13.3% per year for these commodities. This growth rate is substantially below that experienced during 1967-73.

Table 56: INDEX OF MAJOR AGRICULTURE EXPORTS, 1979

(1973 = 100.0)

	Volume	Value		Unit Value	
		Current	Constant /1	Current	Constant /1
Coffee Beans	112.0	187.0	111.0	167.0	99.1
Cotton	118.4	146.8	87.1	124.2	73.7
Cocoa Beans	161.4	200.0	118.7	124.6	73.9
Sugar	111.1	145.2	86.2	130.7	77.6
Beef	60.6	108.3	64.3	172.9	102.6
Soybeans	296.0	306.2	181.7	103.6	61.5
Soymeal and Cake	175.0	183.7	109.0	104.3	61.9
Tobacco	106.7	175.9	104.4	163.9	97.3

/1 Constant values have been derived by deflating the current values by the index of international prices as projected by the Economic Analysis and Projections Department, April 8, 1974. This index has a value of 168.5 in 1979 compared to 100.0 in 1973.

Source: Mission estimates.

168. The slower growth anticipated for export of agricultural commodities means that the role of manufactured exports will be more crucial than in the 1967-73 period. Unfortunately, there are substantial uncertainties about the evaluation of the future demand for industrial exports. A slowdown in the rate of growth of the countries which provide the major markets for Brazil's manufactured exports was evident in late 1973 and early 1974. This will, in all probability, have repercussions on the rate of growth of manufactured exports which are projected to decline from the 55% annual rate of 1970-73 to 30% annually for 1974-76 and accelerate to 35% for the remainder of the decade. It should be pointed out that given the expansion of the size of the base (from US$202 million in 1967 to US$1,366 million in 1973), this is still a very substantial rate of increase. Under these assumptions total exports would grow at 21% per year over 1973-79 with manufactured exports accounting for 45% of the total increase in dollar value of exports. Should Brazil be able to sustain a growth rate of 40% for manufactured exports over 1973-79, total exports should increase at a 24% annual rate.

E. Import Requirements

169. The critical elements in determining import requirements over the next five years will be the relationship between capital goods imports and GDP growth and the future evolution of world petroleum prices. It is clear

Table 57: MERCHANDISE EXPORT PROJECTIONS, 1973-79

	Value 1973	Value 1979	Average Annual Growth Rate, 1973-79
A. Coffee	1,343	2,507	11.0
Coffee Beans	1,243	2,324	11.0
B. Agriculture	2,517	5,640	14.4
Cotton	218	320	6.6
Cocoa	89	178	12.2
Sugar	553	803	6.4
Beef	144	156	1.3
Soybean	433	1,326	20.0
Soy Meal and Cake	484	889	10.7
Others 1/	596	1,968	22.0
C. Minerals	407	1,947	29.5
Iron Ore	363	1,850	31.0
D. Semi-Processed and Manufactured	1,841	9,196	30.5
Semi-Processed 2/	475	1,812	25.0
Manufactured 3/	1,366	7,384	32.5
E. Other 4/	90	159	10.0
TOTAL MERCHANDISE EXPORTS	6,198	19,458	21.0

1/ Corn, tobacco, sea-food, horse-meat, nuts, raw-hides, bananas, sisal, pepper, cotton seed, sorghum, etc.

2/ Cocoa-butter, pinewood, castor oil, wax, iron and steel, peanut oil, tanned hides and skins, etc.

3/ Canned beef, soybean oil, footwear, machinery and equipment, iron and steel products, transport material, cotton yarn, cotton fabric, chemicals, glass and glassware, wood veneers, vegetable and fruit juice, etc.

4/ Ship-chandler's supplies, re-exports and special transactions.

Source: Mission estimates.

that it will be difficult to sustain rates of GDP growth as high as those experienced in recent years if export growth slackens to the extent indicated above. However, the expected behavior of capital goods import requirements would tend to temper the extent to which GDP growth will have to be reduced.

170. The very high demand for imports during the recent rapid growth of the economy has largely been a reflection of accelerated expansion of industrial output and of increasing levels of domestic investment. While the low implicit incremental capital-output ratio (ICOR) during 1967-73 reflects efficient utilization of industrial capacity, the ICOR has been increasing gradually in recent years as the growth of investment has been considerably higher than the rate of growth of output (16.9% compared with 10.2% over 1967-73). Because of the rapid increase of investment, the elasticity of capital goods imports relative to increases in fixed investment (and relative increase in GDP) has been high. This reflects the fact that the domestic industry has not been able to keep up with the demand for capital goods. While at somewhat slower rates of growth, investment will still require continued heavy importation of technologically sophisticated goods, the domestic industry will be able to supply a larger proportion of total requirements. Thus, the rate of increase in capital goods imports could be expected to decline more than the rate of increase of investment. This phenomenon would tend to be reinforced by a trend toward increasing import substitution in the capital goods industry, especially in transportation equipment. At an 8.5% rate of growth of the economy, capital goods imports could be expected to increase 18.5% per year (or about 9.0% in real terms) while at a 10.0% growth rate the increase of the capital goods import growth rate to 12.0% (in real terms) would be somewhat more than proportionate.

171. In the case of intermediate goods, the key factors determining future import requirements will be the demand for and expansion of capacity for domestic production of steel products, petrochemicals and crude petroleum. While import demand for steel can be expected to decline gradually as domestic productive capacity expands, the prospects for import substitution in crude petroleum appear to be quite limited. Some foreign exchange savings can be achieved by expanding domestic production of petrochemicals; however, imports of the raw materials and crude petroleum will become a major burden on the balance of payments. It has been assumed that petroleum imports volume will increase moderately in 1974 as stocks accumulated in 1973 are drawn down and will increase at a rate of 10% per year over 1975-79. This would result in an increase in crude petroleum imports to US$4,946 million in 1979 if the price per barrel increases from US$9.60 per bbl. in 1975 to US$12.81 as the Bank staff currently anticipates. The increase in petroleum imports alone would account for almost a quarter of the total increase in imports. There is little likelihood that substantial substitution of other energy sources for petroleum can be accomplished over the medium term, in this case the next five years, and the growth of import volume will depend largely on the overall growth rate.

Table 58: MERCHANDISE IMPORTS UNDER ALTERNATIVE GROWTH PATHS, 1973-79

(Amounts in US $ million)

	1973	1974	1979		Percent Composition 1/			Annual Average Growth 1973-79		Contribution to Growth 1/ 1973-79	
			Alt.I	Alt. II	1973	1979 Alt. I	1979 Alt. II	Alt. I	Alt. II	Alt. I	Alt. II
Consumer Goods	899	1,192	1,905	2,083	14.8	9.4	9.2	13.3	15.0	7.0	7.2
Wheat	334	450	382	437	5.5	1.9	1.9	2.3	4.6	0.3	0.6
Other non-durable	225	313	575	625	3.7	2.8	2.8	16.9	18.6	2.4	2.4
Durable	340	429	948	1,021	5.6	4.7	4.5	18.6	20.0	4.3	4.1
Intermediate Goods	2,517	5,249	11,057	11,816	41.4	54.3	52.5	28.0	29.5	59.8	56.5
Crude Petroleum	579	2,597	4,946	4,946	9.5	24.3	22.0	43.0	43.0	30.6	26.6
Chemicals	849	1,152	3,073	3,455	14.0	15.1	15.3	24.0	29.0	15.6	15.8
Metals	675	1,011	1,947	2,215	11.1	9.6	9.8	19.3	22.0	8.9	9.4
Other	414	489	1,091	1,200	6.8	5.4	5.3	17.5	19.4	4.7	4.8
Capital Goods	2,599	3,089	7,227	8,438	42.8	35.5	37.5	18.6	22.0	32.4	35.5
Machinery & Equipment	2,109	2,471	5,863	6,838	34.7	28.8	30.4	18.6	22.0	26.3	28.8
Transport Material	490	618	1,364	1,600	8.1	6.7	7.1	18.6	22.0	6.1	6.7
Other	60	76	167	181	1.0	0.8	0.8	18.6	20.0	0.7	0.7
TOTAL FOB	6,075	9,606	20,356	22,520	100.0	100.0	100.0	22.3	24.5	100.0	100.0

1/ Figures may not add up due to rounding.

Source: Mission estimates

Table 59: ALTERNATIVE GROWTH PATHS - NATIONAL ACCOUNTS PARAMETERS

	1967-73	1973-79 Alt. I	1973-79 Alt. II
I. Growth of Macroeconomic Parameters			
Gross Domestic Product	10.2	8.5	10.0
Investment	16.9	9.3	11.4
Savings	16.0	8.6	11.0
Exports	14.5	11.1	13.9
Exports - Capacity to Import	18.5	8.7	11.6
Imports	20.0	10.0	12.3
Consumption	9.3	8.2	9.5
Marginal Savings Rate	.288	.218	.244
Marginal Import Requirement	.177	.142	.151
	1973	1979 Alt. I	1979 Alt. II
II. Composition of GDP			
Gross Domestic Product	100.0	100.0	100.0
Terms-of-Trade Effect	2.3	1.2	1.4
Imports	11.7	12.6	13.2
Exports	10.6	10.7	11.5
Resource Gap	1.1	2.0	1.6
Resources Available	103.4	103.2	103.0
Consumption	80.8	79.6	78.7
Investment	22.6	23.6	24.3
Savings	21.5	21.6	22.7

Source: Mission estimates

F. Alternative Developments, 1974-79

172. Because of the effect of actual and projected increases in world petroleum prices and the generally less favorable outlook for exports, it is probable that balance of payments' performance over 1974-79 will be less satisfactory than it has been in recent years. This in turn will tend to operate as a constraining factor on the domestic economy. It is projected that as an immediate consequence of increased petroleum prices and an anticipated slowing of export growth the current account deficit will rise to US$3.8 billion in 1974, as compared to US$1.3 billion in the previous year. Projections of balance of payments' performance through 1979, assuming a 10% GDP growth rate and exports as projected in Table 57 indicate a current account deficit widening to US$7.5 billion in that year. Improvements in domestic saving could reduce import requirements, although even a gradual reduction in the growth rate from 10% in 1974 to 8% by 1976 would require a small increase in the average savings rate from 21.5% of GDP in 1973 to 21.6% in 1979. The marginal savings rate this implies, 0.218 is lower than that during 1967-73, 0.288. While sustaining significantly better savings performance should be possible, higher savings rates in the face of deteriorating terms of trade would not be easy and would call for measures by the authorities restraining domestic consumer demand.

173. With exports growing at 21% per year, as projected above, it should be possible to sustain a growth rate at the lower end of the Government's target of 8 to 10%. With the momentum already built up in the economy, 10% growth of GDP is inevitable for 1974. However, attempting to maintain such a rate of growth would result in steadily widening balance of payments' current account deficits and geometrically rising requirements for borrowing on the world's money markets through the financial credit mechanism. This would not happen if export growth of manufactures could maintain their recent momentum and if the marginal savings rate can be pushed upwards -- see para. 177. If this is not feasible the alternative is to move the economy gradually toward a lower growth path -- to 9% in 1975 and 8% in 1976 -- and to sustain an 8% growth rate for the remainder of the decade. 1/ This would still imply a widening of the resource gap from US$681 million in 1973 and US$3,281 million in 1974 to US$3,787 million by 1979. With increasingly larger factor income payments reflecting growing interest obligations on external debt and profit remittances, the current account deficit would grow from US$1,307 million in 1973 to US$3,779 million in 1974 and US$5,869 million by 1979. It should be noted, however, that both the resource gap and current account deficit would, under these assumptions, stabilize toward the end of the decade (see Appendix Table 3.12). Furthermore, in terms of constant 1974 prices, the deficit in 1979 would be $3,970 million. It should be possible to finance the current account deficit, which would average US$4,900 million per year over 1974-79 2/ without endangering the country's external liquidity either by reducing foreign exchange reserves or accumulating overly burdensome debt service obligations.

1/ Identified as Alternative I in tables 59-61.
2/ US$3,940 million average in terms of constant 1974 prices.

174. The composition of capital inflows will depend on the condition of world capital markets and also on government policy. The large increase in foreign direct investment into Brazil in 1972-73 to US$940 million has been continuing and a nominal rate of increase of 10% per year is projected for 1974-79. Commitment on suppliers' credits have been projected at 25% of capital goods imports, a proportion somewhat lower than the 30% actually experienced during 1967-73. Commitments by international lending agencies have been projected at US$800 million per year. No reserve drawdown is called for during the period, in line with the Government's policy of maintaining high reserve levels. Financial credits are theoretically the residual item but in fact the availability of these capital inflows on satisfactory terms will be a major determinant of Brazil's growth prospects over the next few years. Two balance of payments projections have been prepared for 1974-79, one assuming a six year minimum maturity and the other 10 years for new financial credits (Alternative I and Alternative I(a) in Table 60). The difference in external liquidity resulting from a less favorable term on financial credits is substantial.

175. A growth path with GDP increases tapering down to 8% by 1976 would result in an average annual current account deficit of US$4,900 million. This would require an average net inflow of financial credits of US$2,150 million per year (ranging from US$2,041 million in 1974 to a high of US$2,424 million in 1978). This compares with a net inflow of US$1,850 million in 1973 (US$3,152 million gross). Total debt outstanding would rise from an estimated US$12.6 billion at the end of 1973 to US$34.3 billion at the end of 1979. The debt service burden and external liquidity will depend heavily on the term of financial credits. Since the average interest rate is assumed to be the same in both cases, 10%, the current account balance and net financial credit inflow requirements would not be affected by shortening of terms. It should be pointed out, however, that most financial credits are variable interest rate obligations carrying interest rates parallel to and slightly above the Eurodollar rate. Annual fluctuations in the rate are likely, and will affect service payments due in any given year. Shorter maturities on financial credits would mean higher annual amortization payments and higher gross borrowing requirements. If minimum maturity on new financial credits is six years, gross inflows on financial credits of US$4,786 million per year would be required. The debt service ratio as conventionally measured would in this case, decline from 36.1% in 1973 to 30.8% in 1979. It should be pointed out, however, that calculated on a liquidity basis, taking into consideration the level of foreign exchange reserves (i.e., annual debt service payments as a proportion of export earnings plus reserves in excess of three months' imports) the ratio would increase from 20.6% in 1973 to 29.9% in 1979 because of the decline in excess reserves.

176. If a 10-year minimum maturity could be maintained in financial credit inflows, Brazil's external liquidity would be considerably better. In this case average gross financial credit inflows required would be US$3,920 million and the debt service ratio would be 21.6% in 1979 (21.0% on a liquidity basis). This is obviously a much more desirable outcome but it should be pointed out that in neither case does the debt service burden appear unmanageable over the short run from a liquidity viewpoint, while the resource gap and the current account deficit should tend to stabilize at the end of

Table 60: BALANCE OF PAYMENTS PROJECTIONS UNDER ALTERNATIVE ASSUMPTIONS, 1973-79

(amounts in US$ million)

				Alternative I		Alternative I(a)		Alternative II	
	1973	Average 1969-73	1974	1979	Average 1974-79	1979	Average 1974-79	1979	Average 1974-79
Exports	6,577	3,908	8,486	20,640	13,466	20,640	13,466	23,719	14,744
Imports	-7,258	-4,438	11,767	24,427	17,120	-24,427	17,120	27,024	-18,210
Resource Balance	-681	-530	-3,281	-3,787	-3,654	-3,787	-3,654	-3,305	-3,466
Net Factor Income	-654	-479	-518	-2,102	-1,266	-2,102	-1,266	-2,010	-1,229
Transfers	28	20	20	20	20	20	20	20	20
Balance on Current Account	-1,307	-989	-3,779	-5,869	-4,900	-5,869	-4,900	-5,295	-4,675
Direct Foreign Investment	941	347	1,000	1,610	1,286	1,610	1,286	1,610	1,286
Medium- & Long-Term (net)	825	399	738	2,132	1,464	2,132	1,464	2,319	1,540
Financial Credits (net)	1,850	1,255	2,041	2,126	2,150	2,126	2,150	1,366	1,849
(Gross Disbursements)	(3,152)	(1,989)	(3,509)	(6,344)	(4,786)	(4,444)	(3,920)	(5,364)	(4,403)
(Amortization)	(1,302)	(734)	(1,467)	(4,218)	(2,636)	(2,318)	(1,770)	(3,998)	(2,554)
Other (net)	-172	267	-	-		-		-	-
Capital Inflow (net)	3,444	2,268	3,779	5,869	4,900	5,869	4,900	5,295	4,675
Surplus (+)/Deficit (-)	2,137	1,279	-	-	-	-	-	-	-
Debt Outstanding	12,600		15,379	34,298		34,298		32,945	
Debt Service Ratio	36.4		24.7	30.8		21.6		25.5	
Liquidity Ratio	20.6		17.0	29.9		21.0		25.5	

Alternative I: GDP growth rate 10% in 1974, 9% in 1975 and 8% between 1976-79. Average maturity on financial credits assumed to be 6 years.

Alternative I(a): Same growth assumptions as Alternative I. Average maturity on financial credits assumed to be 10 years.

Alternative II: GDP growth rate 10% between 1974-79 and higher manufactured exports. Average maturity on financial credits assumed to be same as Alternative I.

Source: Mission estimates.

the decade and then decline over the long run. The major question is whether the international money markets in the years ahead will support the level of borrowing required by Brazil, on acceptable terms.

177. Brazil's growth prospects over 1974-79 will depend heavily on the performance of manufactured exports. The above projections are based on the assumption that the growth of manufactured exports drops rather sharply, to 30% per annum in current prices for 1974-76 and rises to 35% in the latter part of the decade. It amounted to 38% per annum in 1967-73 and 55% in 1970-73. The volume growth rates were probably 28.5% and 38.0%. The projected volume growth is 19% for 1974-76 and 25.5% for 1977-79. If, however, manufactured export growth can be sustained at 40% per year, a 10% growth rate of GDP could prove to be feasible. The balance of payments' implications of such a growth path are indicated in Alternative II of Tables 60 and 61. In this case the current account deficit would average US$4,675 million per year. Net annual inflow of financial credits would have to be US$1,849 million assuming a 6-year term on financial credits -- still quite substantial amounts to mobilize. The debt service ratio would be 25.5% in 1979. It should be pointed out, however, that the performance would require an increase in the saving rate to 22.7% of GDP by 1979 implying a substantially higher marginal rate, 0.244 compared to 0.218 at the lower growth path.

178. Multilateral lenders can expect to be called upon to play a more important role in Brazil over 1974-79, 1/ not only because the availability of other sources on good terms may be somewhat less ample than in the past but also because multiple lenders act directly to mobilize other sources of financing and because the level of their activity is taken by the financial community as a measure of the confidence these agencies have in the economic management of the country. While substantially lower levels of commitments by multilateral lenders during 1974-79, even if substituted by financial credits, would have little impact on external liquidity by 1979, this is largely due to lags between commitments and disbursements and implies a stronger effect in the 1980's.

G. Near Term Growth Strategy

179. At this juncture it is not possible to predict the course of the world economy over the next few years with any degree of certainty. Given the inflationary pressures already evident in the Brazilian economy and the generally less favorable balance of payments' outlook, a certain amount of caution by the authorities would seem to be called for in the pursuit of their growth objectives. Under the circumstances, sufficient flexibility should be maintained in short and longer-term policies and programs so that adjustments can be made as the situation evolves.

1/ Between 8.8 and 10.2% of gross capital inflows depending on whether minimum maturities on financial credits are 6 or 10 years in our projections, compared to about 6% in the recent past.

Table 61: LIQUIDITY IMPLICATIONS OF ALTERNATIVE GROWTH PATTERNS, 1979

(amounts in US$ million)

	1973	1979 Alt I 1/	1979 Alt I(a) 1/	1979 Alt II
1. Debt Outstanding 2/	12,600	34,289	34,289	32,941
Medium & Long-Term	4,818	13,602	13,602	14,060
Financial Credits	7,782	20,687	20,687	18,881
2. Debt Service (net)	2,372	6,358	4,459	6,047
Amortization	1,938	4,703	2,804	4,484
Interest Payments	834	2,194	2,194	2,102
Interest Receipts 3/	400	539	539	539
3. Exports	6,577	20,640	20,640	23,719
4. Imports	7,258	24,427	24,427	27,024
5. Reserve Level	6,735	6,735	6,735	6,735
6. Debt Service Ratio (%) 4/	36.1	30.8	21.6	25.5
7. Liquidity Ratio (%) 5/	20.6	29.9	21.0	25.5
8. Reserves/Imports (number of months)	11.1	3.3	3.3	3.0
9. Reserves/Debt Outstanding (%)	53.5	19.6	19.6	20.4

1/ Alternative I and I(a) differ only in the average maturity on financial credit inflows.
2/ Debt outstanding and disbursed only.
3/ Interest earnings on foreign reserves.
4/ Debt service as percent of exports of goods and non-factor services.
5/ Debt service/(Exports + Reserve level - 3 months' imports).

Source: Mission estimates.

180. Some indications of overheating of the economy were in evidence during 1973 as demand began to outrun domestic supply for intermediate goods, raw materials and to some extent, consumer goods in most instances, for the first time in recent history. Continued rapid growth of the economy in 1974 is likely to result in growing inflationary pressures. These will be intensified by the sharp increase in petroleum prices and a tendency toward accelerating world inflation. While some of the bottlenecks in domestic production can be partially relieved by facilitating imports, some cannot. This would be true, for instance, in the case of bottlenecks caused by pressure on the southern transportation system resulting from increased shipment of agricultural exports, or of shortages of skilled or semi-skilled labor, both of which are likely to become increasingly important in 1974. It is also conceivable that occasional shortages of key agricultural commodities such as beans or rice might occur as domestic demand increases rapidly.

181. The new administration which took office in March 1974 has responded to this situation by developing mechanisms to give it better control over the behavior of aggregate demand. A comprehensive monetary budget has been constructed which brings the Bank of Brazil under the ceilings of the monetary authorities. Moreover, a mechanism has been developed which permits continuous monitoring of credit expansion so that corrective action can be taken, if needed, with minimal lags. The Central Bank intends to permit a maximum 35% expansion of the money supply in 1974 compared to 48% in 1973. The authorities have already permitted corrective price adjustments in the first four months of the year (including a very substantial increase in gasoline prices) which have resulted in a 17% price increase during this period. They believe that the monetary program will result in a reduction in the annual rate of inflation to less than 20% during the remainder of 1974. In addition, measures have been taken to restrain the growth of consumer credit. Moreover, the monetary program is expected to reduce the real rate of growth, which had been proceeding at a pace well above 10% during late 1973 and early 1974, to 10%. Finally, the authorities have budgeted a substantially greater percentage expansion of agricultural credit than industrial credit, in recognition of the need to encourage production of crops where supply difficulties have been a matter of concern.

182. The Brazilian authorities would prefer to maintain the 10% growth rate achieved in recent years until it proves not to be feasible. They believe that they can, through proper monetary management and sectoral policies, reduce inflationary pressures and improve basic supply factors. In addition, they feel that there has not yet been any indication that their balance of payments' situation has become unmanageable. Ministry of Finance officials feel that a 10% growth rate can be sustained without increasing the current account deficit beyond US$4 billion. They are confident that the recent growth of manufactured exports, which averaged 55% per year over 1970-73 can be sustained. In order to help assure this they are considering rationalizing and improving the system of export incentives. They are also giving additional emphasis to agricultural production for export. The authorities have indicated that if developments in the external sector prove to be adverse, i.e., export growth slackens, reserves begin to decline, and/or

foreign capital markets do not appear to be willing to support Brazilian borrowing of the magnitude required on satisfactory terms, they are prepared to tighten management of the economy and sacrifice their growth targets. Moreover, they feel that their actions thus far prove that they have the tools to do so and would not be reluctant to use them.

183. Nevertheless, there is a certain amount of risk implicit in the Brazilian strategy. While the Government's optimism about the future growth of manufactured exports and about their ability to attract funds from the Eurodollar market may prove to be justified, there is the distinct possibility that export growth will slacken and/or that terms and conditions for borrowing through financial credits will harden. If export growth turns out to be below its expectations, the Government could conceivably opt for an alternative of attempting to maintain the rate of growth despite a widening current account deficit by borrowing increasingly larger amounts, thus compromising its external liquidity and becoming dependent upon very high gross borrowing requirements to meet its amortization obligations. A sudden tightening of the world's capital markets could, in addition, lead to the need to accept a substantial shortening of debt maturities in order to maintain financial credit inflows of the volume required. Under these circumstances Brazil could become vulnerable to the necessity for a very severe contraction in the rate of growth.

184. It will be necessary for the Brazilian authorities to respond as quickly as possible to adverse developments in the external sector, should they arise, by further tightening their control over the growth of domestic demand. Over the next few years policy should be planned on the assumption of a less propitious external environment than in the last six years, thus calling for lower target expansion rates for domestic spending. The authorities are, however, alert to the risks implicit in their near term strategy and are monitoring the situation closely. The quality of the Government's economic management, the strength of the foreign exchange reserve position and the lack, thus far, of a demonstrable weakening of export performance indicate that the authorities would have both the ability and the margin of time to bring about a reasonably smooth transition to slower growth, if external factors compel them to do so.

MARCH 1965

TR40-1435