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July 7, 1987

To: Members of the Executive Board

From: The Secretary

Subject: Case Studies of Programs of Rapid Disinflation

The attached paper on case studies of programs of rapid disinflation provides background information to the paper on high inflation, "heterodox" stabilization, and fiscal policy (SM/87/141, 6/25/87) and its companion paper on rapid disinflation and external adjustment (to be issued in the near future). This matter will be the subject of a seminar discussion after the Annual Meetings.

Mr. G. G. Johnson (ext. 8779) will be available to answer technical or factual questions relating to this paper. On issues pertaining to individual countries the following staff members will be available: Argentina - Mr. Berengaut (ext. 8783); Bolivia - Ms. Atkinson (ext. 7359); Brazil - Mr. Oliveros (ext. 8784); and Israel - Mr. Kreis (ext. 8640).

Att: (1)

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INTERNATIONAL MONETARY FUND

Case Studies of Programs of Rapid Disinflation

Prepared by the Exchange and Trade Relations and
Fiscal Affairs Departments

(In consultation with other Departments)

Approved by L.A. Whittome and Vito Tanzi

July 1, 1987

This paper provides information on the programs of rapid disinflation adopted in 1985-86 by Argentina, Bolivia, Brazil, and Israel as background for "Rapid Disinflation and External Adjustment" (to be issued) and "High Inflation, Heterodox Stabilization, and Fiscal Policy" (SM/87/141, 6/25/87).

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Part A. Recent Experience with Inflation Stabilization in Argentina

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I. Introduction

On June 14, 1985, after a decade of very high inflation and disappointing growth performance, Argentina undertook a stabilization program aimed at a rapid elimination of inflation. The economic program that formed the basis of the authorities' anti-inflationary policies was markedly different from the policies that had been followed previously. The comprehensiveness of the policy package and the rapidity with which inflation was expected to respond to the policy measures were the key distinguishing factors. The program succeeded in reducing substantially the rate of inflation; however, price stability, the original goal of the program, was not achieved.

This note is intended as a description of the Argentine case of anti-inflationary policies and it is organized as follows: Section II provides a broad description of the inflationary process in Argentina concentrating on those factors that were most directly associated with the high and variable rate of inflation. Section III reviews some of the authorities' previous efforts to control inflation and the reasons for their relative lack of success. Section IV contains details of the June 14, 1985 program. Basic economic policies and developments since the introduction of this adjustment program are reviewed in Section V. A summary is provided in Section VI. Lastly, Argentina's relations with the Fund in the period 1983-86 are set out in Annex I.

II. The Nature of the Inflationary Process in Argentina

High and variable inflation was a constant feature of the Argentine economy throughout the period 1975-1985 (see Tables 1 and 2). 1/ The rate of inflation, as measured by the CPI, rose from less than 25 percent in 1974 to 180 percent in 1975 and over 440 percent in 1976. It declined subsequently to about 100 percent a year in 1980-81 but rose to over 600 percent in 1984. By the second quarter of 1985, the annualized monthly rate of price changes had risen to over 2000 percent.

In a country in which inflation had been seen almost as a permanent feature of the economy it is often difficult to make clear cut distinctions between causes and effects of inflation. Over time, economic agents came to expect inflation and alter their behaviour to minimize the adverse impact of high and variable inflation on their economic well-being. Such adjustments in turn had a major impact on the

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1/ The two basic measures of inflation in Argentina are the Consumer Price Index for Buenos Aires and the Wholesale Price Index; both are compiled by the National Institute of Statistics and Census. The CPI is sampled several times each month and attempts to measure actual rather than list prices; it is based on 1972 weights. The WPI is sampled once a month and uses list prices; it is based on 1981 weights.

Table 1. Argentina: Price Developments 1961-1986

(Annual percentage changes)

Year	CPI	WPI
1961	14.0	10.0
1962	28.1	27.3
1963	24.0	42.9
1964	22.1	30.0
1965	28.5	30.8
1966	31.7	20.6
1967	29.4	4.9
1968	16.1	9.3
1969	7.6	6.4
1970	13.6	14.0
1971	34.8	39.0
1972	58.4	76.7
1973	61.2	50.4
1974	23.5	19.9
1975	182.3	192.5
1976	443.2	499.1
1977	176.1	149.5
1978	175.5	146.0
1979	159.5	149.3
1980	100.8	75.4
1981	104.5	109.6
1982	164.8	256.2
1983	343.8	360.9
1984	626.7	573.4
1985	672.1	662.9
1986	90.1	78.3

Source: International Financial Statistics

Table 2. Argentina: Price Developments 1984-86

(Monthly percentage changes)

Year	CPI	WPI
1984		
January	12.5	11.5
February	17.0	15.9
March	20.3	18.4
April	18.5	19.7
May	17.1	18.8
June	17.9	16.6
July	18.3	15.5
August	22.8	21.9
September	27.5	24.7
October	19.3	15.4
November	15.0	14.7
December	19.7	23.2
1985		
January	25.1	21.2
February	20.7	17.8
March	26.5	27.7
April	29.5	31.5
May	25.1	31.2
June	30.5	42.3
July	6.2	0.9
August	3.1	1.5
September	2.0	0.6
October	1.9	0.7
November	2.4	0.7
December	3.2	1.0
1986		
January	3.0	--
February	1.7	0.8
March	4.6	1.4
April	4.7	3.0
May	4.0	2.7
June	4.5	4.6
July	6.8	5.1
August	8.8	9.4
September	7.2	6.8
October	6.1	5.3
November	5.3	4.9
December	4.7	3.0

Source: Data provided by the Argentine authorities.

inflationary process itself. Accordingly, the inflationary process is discussed in this note mainly in terms of factors that were associated with the movement to higher and higher rates of inflation, as well as those that made inflation less amenable to policy intervention. 1/

The description of the inflationary process in Argentina is presented below in terms of three broad policy areas: fiscal imbalances, wage policy, and monetary accommodation. External factors are brought out where appropriate including the section on previous stabilization efforts.

1. Fiscal imbalances

In the early 1980s, the deficit of the nonfinancial public sector rose sharply (from about 8 percent of GDP in 1980 to about 18 percent of GDP in 1982). While expenditures rose from 36 percent of GDP in 1980 to 41 percent of GDP in 1982, revenue declined from 28 percent to 23 percent of GDP. Also, since 1982, the Central Bank has incurred operating losses amounting at times to several percentage points of GDP.

The rise in expenditure was mainly on account of a sharp increase in interest payments on the public sector's external and domestic debt. Interest payments increased from 2 percent of GDP in 1980 to 9 percent of GDP in 1982 owing mainly to the rapidly expanding stock of debt, the rise in the level of interest rates, and (for the external debt) the depreciating exchange rate.

1/ It is important to note that an inherent limitation on explaining inflation is the fact that certain important determinants of inflation such as inflationary expectations, or the credibility of government policies, are not directly observable; while their importance is obvious, their magnitude or even the direction of change, quite often, is not.

Argentina: Fiscal Indicators 1/

(In percent of GDP)

	1978	1979	1980	1981	1982	1983 2/	1984	1985	1986
Revenue	25.626.727.8		25.5	23.4	23.6	22.3	26.7	28.4	
Expenditure	32.4	33.5	35.8	42.2	41.4	35.8	33.7	33.7	32.3
Fiscal balance	-6.8	-6.8	-8.0	-16.7	-18.0	-12.2	-10.8	-7.0	-3.9

1/ Nonfinancial public sector on a budget basis through 1982; combined public sector deficit (i.e., including operating losses of the Central Bank) on a cash basis starting in 1983. Public enterprises are included on a net basis.

2/ Break in series.

In addition to the increase in public expenditure, other factors that were important in the evolution of the public sector deficit and its contribution to the inflationary process included shocks in the availability of foreign savings for the financing of the deficit and delays in adjusting public sector tariffs. In turn, as inflation accelerated the deficit widened, owing to the effects of collection lags on real tax revenues.

a. Bank financing of the deficit

The inflationary impact of any given level of the public sector deficit depends on the extent to which the deficit is financed with bank credit. Accordingly, shocks in the availability of other forms of financing, such as foreign savings, unless they are adjusted to, increase the public sector's demand for bank credit and add to inflationary pressures. In Argentina, in 1981-82 net external borrowing by the nonfinancial public sector amounted to some 40 percent of the financing requirement of the public sector. This source of financing ceased to be available in 1982 and it became negative in 1983. The two most important causes of the sharp decrease in the availability of foreign financing were the conflict in the South Atlantic in the second quarter of 1982 and the international debt crisis that developed in mid-1982. Rather than adjusting to these shocks, foreign financing of the deficit was replaced by domestic financing. The bulk of the financing requirement fell on the Central Bank.

b. Public sector prices

The main determinant of the level of nontax revenue in Argentina is the level of tariffs of public enterprises. 1/ Prior to the adoption of the June 1985 program, the authorities followed varying policies with respect to real public sector prices. At times, public sector prices were set based on the financial requirements of the enterprises and the need to limit the public sector deficit. At other times, the authorities attempted to use public sector pricing to influence expectations about inflation. This policy often resulted in prices being raised by less than inflation and higher operating losses of the enterprises which had to be absorbed by the Government.

Argentina: Prices of Goods and Services
Marketed by the Public Sector

(Deflated by the national nonagricultural wholesale price index; index 1980=100)

1979	97.1
1980	100.0
1981	102.4
1982	77.0
1983	90.1
1984	92.4
1985	103.0
1986	105.4

c. The effects of inflation on tax revenue

Much of the decline of the ratio of tax revenue to GDP can be attributed to the effects of the acceleration of inflation in combination with the existence of collection lags. Measures to reduce the impact of collection lags by shortening payment periods and indexing tax payments had been adopted between 1977 and 1980 but in 1983-84 the weighted average tax collection lag was still about 40 days. Such a lag with a monthly average inflation rate of about 5 percent that prevailed in 1980, would have resulted in a loss in tax receipts in that year of about 6 percent of total revenue, equivalent to 1 1/2 percentage points

1/ The level of public sector prices affects revenues of the nonfinancial public sector if public enterprises are included in the presentation of fiscal accounts on a gross basis. If the enterprises are presented on a net basis (i.e., only their operating losses are included as spending of the nonfinancial public sector), the level of real public sector tariffs affects the level of spending.

of GDP. In 1983, with an average monthly inflation of 15 percent, the loss would have been 17 percent of total receipts, or equivalent to almost 4 percentage points of GDP. In 1984, with an average monthly inflation of 19 percent, the loss would have amounted to 21 percent of tax revenue, or more than 5 percentage points of GDP. 1/

Another factor that could account for the decline in the level of tax revenue was a deterioration in taxpayers' compliance. Throughout most of the period of high inflation, the market interest rate was higher than the penalty rate charged on delinquent taxes which provided strong incentives for delaying tax payments.

Other factors that help explain the decline of tax revenue to GDP include expectations of tax amnesties and growing exemptions from payment of import duties, income, net wealth, stamp, and value added taxes which were granted by the Central Government and the provinces as investment incentives. Another factor whose importance is difficult to estimate is the influence of inflation on the expectations of economic agents about the stability of the economy in general. Fears of instability may have contributed to capital flight and a narrowing of the tax base.

2. Wage policy

a. Wage policy through 1983

For several years prior to mid-1982, the Government had refrained from intervening directly in the process of private sector wage determination. During this period, the setting of wages in the public sector had an important effect on wage adjustments in the private sector.

In July 1982, the Government began decreeing economy-wide wage adjustments on a monthly basis to maintain real wages and support aggregate demand. The degree of government involvement in the setting of private sector wages increased in the second quarter of 1983 when the Ministry of Labor began convening special industry commissions which

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1/ An opposite effect of inflation on tax revenue is normally expected because of its implications for the effective tax rates. If nominal income were taxed at progressive rates, taxpayers with unchanged real income drift into higher tax brackets as their nominal income increases and as the real value of exemptions erodes, thus taxpayers would pay a larger part of their income in taxes. In Argentina, however, this effect, was not a significant source of tax revenue because the progressivity of the tax schedule had been indexed fully by issuing new tax schedules on a monthly basis.

recommended for large wage increases. 1/ As a result, the pace of wage adjustments accelerated sharply. The nominal average monthly wage in manufacturing rose by about 600 percent in 1983 compared to about 200 percent in 1982, and in real terms the increase in 1983 amounted to over 30 percent; similar changes took place with respect to wages in the public sector.

b. Wage determination December 1983-June 1985

In the period December 1983-March 1985, wage policy continued to set as a key objective predetermined increases in the real wage in both the private and the public sectors. 2/ This was to be achieved by decreeing each month wage increases slightly higher than the official forecast of inflation. When the official forecast of inflation fell short of the actual rate, catch-up wage increases were decreed. In the second half of 1984 the authorities attempted to slow the pace of wage inflation by lengthening the period between catch-up increases. However, in January 1985, the Government resumed the practice of decreeing catch-up wage increases on a monthly basis.

3. Monetary accommodation

Several factors that operated during the period 1975-85 strengthened the accommodative character of central bank operations and increased the inflationary impact of monetary expansion. The most important of these factors were the following: the widespread and direct involvement of the Central Bank in financial intermediation with many elements of subsidization, the existence of an important informal financial market, a large share of the deposit base that was indexed to price indexes or the exchange rate, and changes in the pattern of demand for financial assets.

a. Central bank operations and debt conversion of 1982

In July 1982, the Central Bank assumed a major and direct role in financial intermediation. Acting on the belief the level of indebtedness of certain sectors in the economy (in particular, the manufacturing sector) had become an obstacle to economic recovery, the Central Bank undertook a refinancing of the largely short-term domestic bank debt of the private sector (generally for a term of five years) through massive central bank rediscounts. Bank deposits were made subject to a 100 percent reserve requirement to offset the direct monetary impact of these rediscounts. However, interest on the refinanced debt and on the Central Bank rediscounts was to be

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1/ See Section III.3 for a description of problems that this policy created for the adjustment program supported by the 1983 stand-by arrangement.

2/ For example, for the period December 1983-December 1984, the target was a 6-8 percent increase in the real wage.

capitalized while the Central Bank paid interest in cash on required reserves, which came to represent an important source of monetary expansion. 1/

Prior to the adoption of these measures, interest rates on deposits had been market determined. Out of concern that the existence of government guarantees of deposits and free determination of interest rates had resulted in an excessive bidding-up of interest rates, in July 1982 the Central Bank also adopted wide-spread regulation of interest rates. These were set at levels that were sharply lower than inflation, as part of the program to reduce the debt burden of the industrial sector.

b. Parallel financial market

Negative real interest rates in the regulated financial system resulted in the development of an informal financial market which intermediated directly between firms. Operations in this market were mostly short term (seven days or less) and were in the form of swaps collateralized by checks or government bonds denominated in foreign currency. Another incentive for the development of the parallel financial market was the growing cost of intermediation through the official market. In order to sterilize the monetary effect of its growing rediscount operations, the Central Bank increased reserve requirements which directly boosted the cost of intermediation. 2/ The shift of financial transactions to the unregulated market raised the money multiplier, increased the inflationary impact of financing operations of the Central Bank, and weakened the ability of the Central Bank to control the monetary aggregates.

c. Indexation of and demand for financial assets

Beginning in July 1982, banks were allowed to offer deposits and loans indexed to specific price indices, and over the period July 1982 to June 1985 the minimum maturities of indexed deposits were shortened or lengthened at various times as the Central Bank tried to encourage or discourage the holdings of these deposits. The maturity of indexed loans generally exceeded that of indexed deposits, and the two

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1/ The Bank subsidized the private sector explicitly through its rediscount programs and implicitly through losses on its intermediation activities. For example, given the uncertainties in the period leading up to the presidential elections in October 1983, there was a great willingness on the part of public to hold indexed deposits but little demand for indexed loans; the Central Bank absorbed large amounts of indexed deposits which were re-lent to banks at regulated interest rates, which at the time were well below the rate of inflation.

2/ Although the Central Bank paid interest on requred reserves, the rate of remuneration was set equal to the deposit rate and thus did not cover fully the banks' operating costs.

instruments were not necessarily linked to the same price index. The Central Bank imposed a 100 percent reserve requirement on indexed deposits and provided an indexed rediscount line to finance indexed loans and assumed the risks associated with maturity transformation or the possibility of losses stemming from differential movements in the price indices. Through this mechanism, the Central Bank also offset any differences in the demand and supply of funds at indexed rates. Early in 1983, deposits indexed to the U.S. dollar were created, and these also were made subject to a 100 percent reserve requirement.

Since early 1981, despite the indexation of financial assets, the Argentine financial system underwent major changes in regard to the public's willingness to hold financial assets. Overall, the international reserve position of the banking system declined, real financial savings declined, the share of savings pre-empted by the borrowing requirement of the public sector increased, and there was a general increase in velocity of financial instruments. For example, the ratio of broad money to GDP declined from over 20 percent in 1980 to less than 15 percent in 1984 and 1985 (Chart 1).

III. Previous Stabilization Efforts

In the period 1978-85, the authorities introduced several programs that aimed to reduce inflation. A short description of these episodes and the reasons for their limited success are provided below. 1/

1. Anti-inflationary policies in 1978-80

Starting in late 1978, the authorities assigned priority to curbing inflation. The key instruments used were the opening of the domestic goods and capital markets to foreign competition through the elimination of restrictions and reductions in tariffs and an adjustable peg system for the exchange rate under which the rate followed a schedule preannounced for several months in advance. Other important prices, such as minimum wages and public sector tariffs, also were preannounced. The preannounced exchange rate schedule implied a declining rate of depreciation and aimed to dampen inflationary expectations and thus lower the cost in terms of output and employment of moving to low inflation. However, the stance of financial policies was not consistent with the inflation path implicit in the exchange rate policy that was pursued. In particular, the domestic borrowing requirement of the public sector was not reduced to the extent necessary and pressures on domestic resources remained strong.

1/ These anti-inflationary programs, notwithstanding their limited effects, had been offered as a possible explanation why the inflationary process in Argentina had not resulted in a hyperinflation.

Initially, this pressure was partly masked by the effects of the opening of the economy to external competition. The overall balance of payments remained strong as the reduction in the exchange rate risk, coupled with high domestic interest rates stemming in part from the continued high fiscal deficit, resulted in large private capital inflows. However, the strategy unraveled in 1980-81. The peso had appreciated markedly in real terms as inflation was not consistent with the preannounced exchange rate schedule (Chart 2). The tradable goods sector was placed in an unviable position and the current account worsened substantially. As the belief that policies could not be sustained became generalized, capital flight began. This forced the authorities to depart from the preannounced exchange rate schedule several times in late 1980 and early 1981 and then to abandon it altogether. The exchange rate was depreciated and the exchange and trade liberalization measures introduced in the period 1978-80 were reversed.

In the initial stages of the program, the rate of inflation fell significantly; in terms of annual changes, the CPI declined from 160 percent in 1979 to about 100 percent in 1980 (in terms of the WPI, which has a larger share of traded goods, the rate of price increase declined from 150 percent to 75 percent). Inflation started to accelerate again in early 1981 and by December 1981 the 12 monthly rate of price increase was 130 percent.

2. Economic program of early 1982

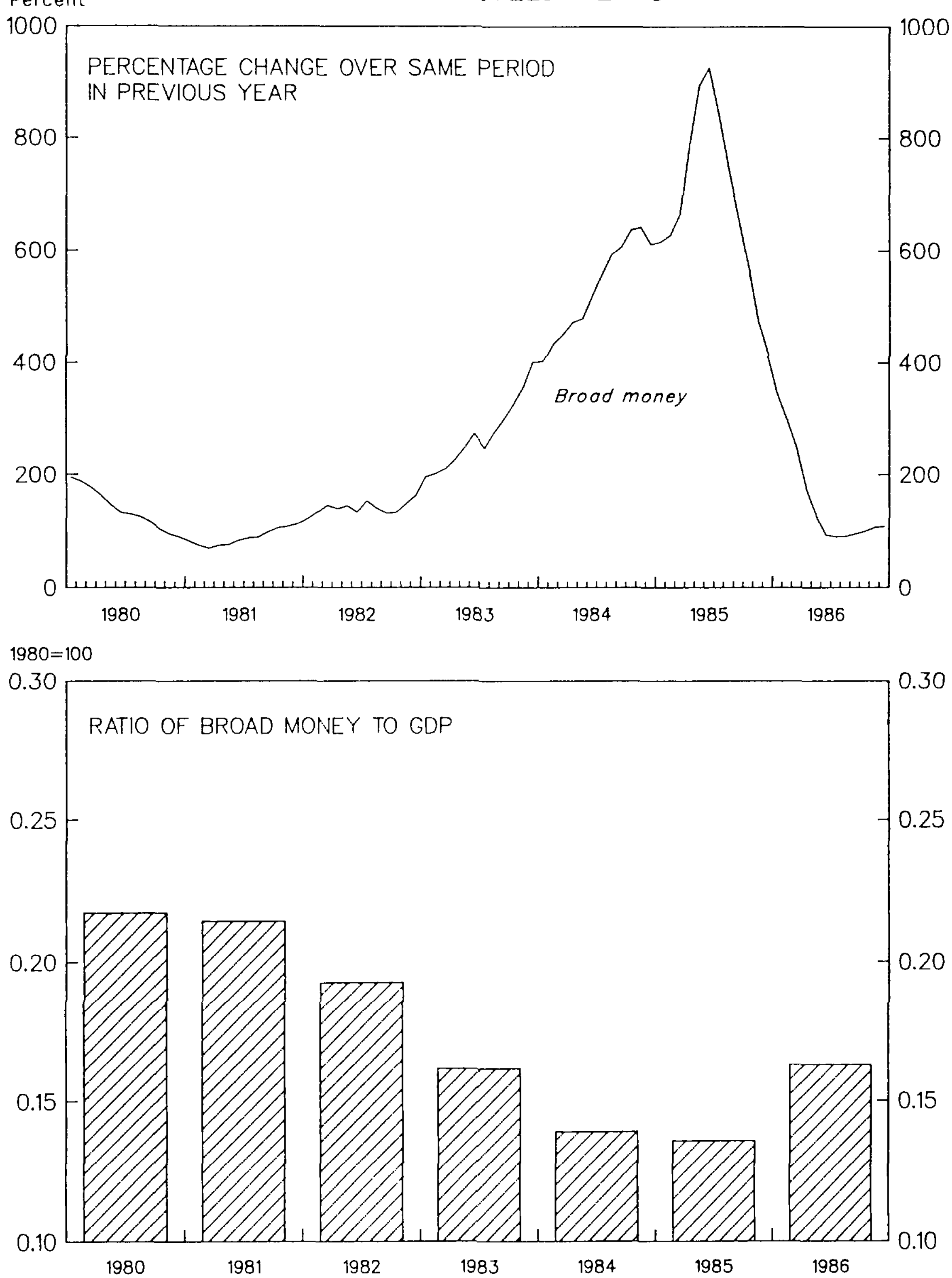
In December 1981, the authorities made a renewed attack on inflation. The major elements of the program were a tightening of fiscal policy (including a reappraisal of the role of public sector in the economy), restraint in monetary policy, and a unification and floating of the exchange rate following a substantial depreciation.

In the fiscal area, the authorities' objective for 1982 was to reduce the overall public sector deficit by some 5 percent of GDP. The 1982 budget was prepared on the basis of 1981 prices (unlike in previous years when projected prices were used) with the understanding that a higher than projected level of prices would result in reductions in physical outlays to stay within budgetary appropriations. Public sector wages and prices charged by public enterprises were frozen at their December 1981 level. Several tax measures were adopted in December 1981 and appropriations were reduced by 10 percent in real terms. Also, transfer payments and capital expenditures were curtailed.

The reappraisal of the role of the public sector included deregulation of public sector activities, divestiture of public sector enterprises in those types of activity where the private sector could be more efficient, and limiting public sector investments to those with adequate rates of return.

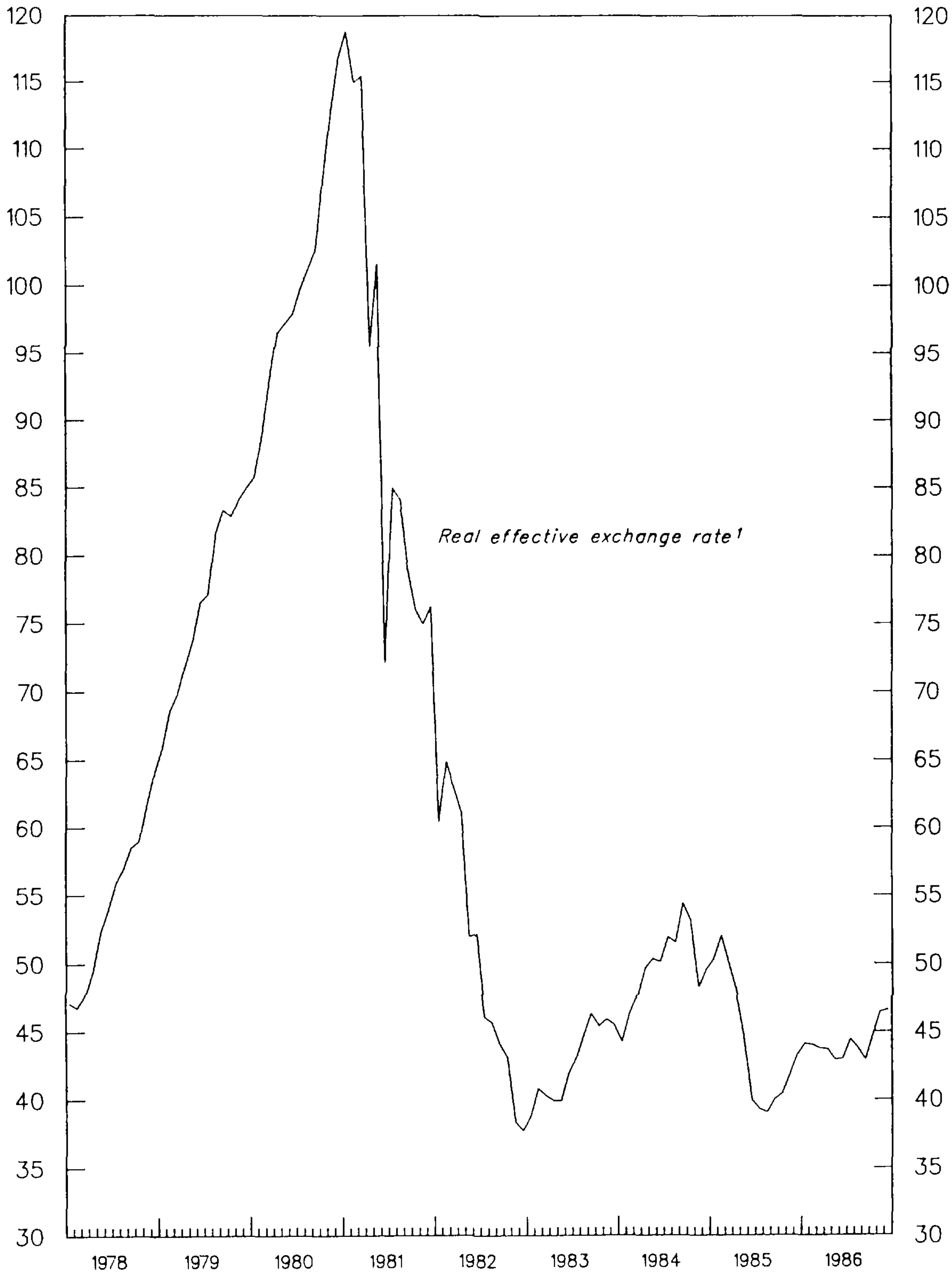
The implementation of the program resulted in a reduction of the overall public sector deficit from 7 percent of GDP in 1981 to 3 1/2 percent of GDP in the first half of 1982. The freeze on wages in

CHART 1
ARGENTINA
MONETARY DEVELOPMENTS



Source: Central Bank of Argentina.

CHART 2
ARGENTINA
EXCHANGE RATE DEVELOPMENTS
(Index 1980=100)



Sources: Central Bank of Argentina; and Fund staff estimates.

[1]Index is trade weighted and includes nominal exchange rates of major trading partners, deflated by consumer prices; increase indicates real appreciation.

the public sector combined with the tight financial policies contributed to a moderation in the rate of increase in private sector wages and the index of real wages in the private sector declined by about 13 percent in the first half of 1982. The annualized rate of inflation came down from an average of 270 percent in December 1981-January 1982 to an average of about 50 percent in April-May 1982.

With the change in administration following the cessation of the hostilities in the South Atlantic in June 1982, the austerity program was abandoned. The tight fiscal policy was relaxed; large wage increases were granted to workers in the public sector and a public works program was instituted. The stance of monetary policy turned toward accommodation and in July 1982 the authorities undertook a reorganization of the financial sector. 1/ The annualized rate of inflation accelerated to an average of 370 percent in the second half of 1982.

3. Economic program supported by the 1983 stand-by arrangement

In the latter part of 1982, the authorities developed a stabilization program that was supported by a stand-by arrangement with the Fund. The program aimed at a substantial moderation of inflation and a marked reduction in the balance of payments deficit through fiscal and monetary restraint, public sector wage restraint and the discontinuation of decreeing economy-wide wage adjustments and flexible exchange rate and interest rate policies. Also, the exchange and trade system was to be liberalized.

Performance under the program was mixed. There was an element of adjustment in the early months of 1983, marked by a decline in inflation and a reduction in the balance of payments deficit, but the effort was not sustained subsequently. A major difficulty in the implementation of the 1983 program was in the area of wage policy. The Government continued to decree wage adjustments for the private sector and beginning in the second quarter of 1983, in line with recommendations of special industry commissions convened by the Ministry of Labor, there was a sharp acceleration in the rate of increase of wages in the private sector. Large wage increases were also granted in the public sector enterprises.

The stance of financial policies moved from adjustment in the early part of 1983 to accomodation in the period that followed. The cash defict of the nonfinacial public sector, which was equivalent to 11 1/2 percent of GDP in 1982, was held below 7 percent of GDP in the first half of 1983. However, the relaxation of wage policy, delays in the adjustment of public sector prices, and growing tax evasion on account at an expected tax holiday raised the fiscal imbalance to nearly 14 percent of GDP in the second half of the year. Credit and interest

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1/ See Section II.3.a. for a description of the measures.

rate policies also were relaxed in the second half of the year. After significant exchange and trade liberalization in late 1982 and the first eight months of 1983, restrictions were reintroduced and payments arrears rose sharply in the latter part of 1983.

As regards inflationary developments, the annualized rate of inflation declined from about 500 percent in the third quarter of 1982 to an average of about 300 percent in the period from the fourth quarter of 1982 to the second quarter of 1983. Subsequently, it rose to over 550 percent in the third quarter of 1983 and to over 600 percent in the fourth quarter.

4. 1984-85 stand-by arrangement

In the period January-September 1984, the authorities attempted to create conditions for sustained economic recovery and a deceleration of inflation based on a strategy that comprised: (i) a reduction in the public sector deficit and in the rate of monetary expansion, and (ii) an incomes policy aimed at reducing progressively the rate of increase of key prices in the economy and achieving a rise in real wages. To implement this strategy, the authorities set certain key variables--essentially, the rate of increase of wages, the rate of depreciation, the rate of increase in public sector wages, and the level of regulated interest rates--each month on a basis of the rate of inflation projected for the month.

Although fiscal policy was strengthened, there was not a corresponding tightening of monetary policy. Inflation consistently exceeded projections and the authorities' policy of increasing real wages required frequent catch-up adjustments. In September 1984, the annualized monthly rate of inflation reached 1,400 percent.

The economic program agreed in September 1984 and supported by the stand-by arrangement approved in December 1984 aimed at a gradual reduction of inflation and an improvement in the balance of payments based on a modest but sustained tightening of policies. The program envisaged a reduction in the 12-month rate of increase in consumer prices from 700 percent in September 1984 to 300 percent in September 1985 and to an annual rate of 150 percent during the last quarter of 1985.

The major elements of the program were a reduction in the public sector deficit, restrained monetary policy, and reforms in wage policy. The public sector deficit was to be reduced (from 10 percent of GDP in 1984 to 5 percent of GDP in 1985) through a reduction in public spending and increases in taxes. The monetary program envisaged a marked reduction in the rate of growth of credit and money. As regards wage policy, the Government was to reduce the size of decreed nominal adjustments over time and increase the time interval between catch-up increases. The program also included commitments to maintain regulated interest rates at a level that was close to the rate of inflation, the exchange rate was to be competitive, and the trade and exchange system was to be liberalized.

Some progress towards stabilization was achieved in the fourth quarter of 1984. There was a tightening of credit policies and an attempt to control public sector spending, but to some extent this was based on postponement of payments, and a build-up of arrears and floating debt. There also was some progress in correcting price distortions in the economy; price controls were relaxed, public sector prices were increased in real terms, and there was a substantial depreciation of the real exchange rate.

The progress achieved in the implementation of the adjustment program in the last quarter of 1984 was reversed in the first quarter of 1985. Decreed wage adjustments were not consistent with the inflationary objectives of the program, public sector spending and the fiscal deficit increased, and credit policy was relaxed. Inflation accelerated markedly.

IV. The Austral Plan of June 1985

The economic situation in the second quarter of 1985 was difficult and deteriorating. The borrowing requirement of the public sector was large (over 12 percent of GDP) and the sole means of financing was through bank credit. The economy was in recession and the rate of inflation was accelerating. The external situation was weak and the gross reserve position was under pressure.

At the same time, however, the authorities moved to correct key relative prices and improve the structure of financial markets to lay the basis for a frontal attack on inflation. In particular, the rate of depreciation of the exchange rate was accelerated, public sector prices were raised, and price controls were practically dismantled. A policy of decreeing wage adjustments equal to 90 percent of the increase in consumer prices of the previous month was adopted, with no provision for catch-up adjustments. The Central Bank implemented changes in the financial system aimed at channeling a larger share of total financial activity through institutional markets, linking the banks' lending operations more directly to their deposit base, and reducing the Central Bank's direct role in the intermediation process.

On June 14, 1985, the Argentine authorities introduced a comprehensive stabilization program. The basis of the effort was a reduction in the public sector deficit to a level that could be financed with a moderate use of foreign savings and a monetary program that would provide for almost no credit net expansion by the Central Bank (it would essentially be limited to issuing currency against purchases of foreign exchange). The major tightening of financial policies was accompanied by a monetary reform, a wage-price freeze and the pegging of the newly-established domestic currency to the U.S. dollar in order to break indexation and reverse inflationary expectations. The financial program was based on the assumption that there would be no inflation in the second half of 1985 and that the weakness of economic activity that had been apparent since mid-1984 would continue through the second half of 1985. The authorities indicated that the overriding objective of the program was the elimination of inflation and that this objective would not be compromised to support economic activity in the case that it weakened more that projected.

1. Fiscal policy

The public sector deficit (the cash deficit of the nonfinancial public sector plus the operating losses of the Central Bank) was to be reduced from 12 percent of GDP in the first half of 1985 to 2 1/2 percent of GDP in the second half of the year, and to an even lower level in 1986. The cash deficit of the nonfinancial public sector was to decline from 7 1/2 percent of GDP in the first half of 1985 to 1 1/2 percent of GDP in the second half. The operating losses of the Central Bank were also projected to fall from 4 1/2 percent of GDP to about 1 percent. Public sector revenues were targeted to increase by close to 6 percent of GDP from the first half of 1985 to the second half of the year, while public expenditures were to decline by 1/2 percent of GDP. The specific fiscal measures were: (i) increases in export taxes and reductions in export rebates; (ii) a 10 percent import surcharge; (iii) increases in gasoline taxes; (iv) increases in cigarette taxes; (v) a tax on bank checking transactions; (vi) a forced savings scheme; and (vii) increases in public sector tariffs. There was a set of contingency measures to ensure that the fiscal objectives would be achieved.

2. Monetary program

The credit program assumed virtually no money growth; credit expansion was to result solely from the Central Bank passing to the public sector the domestic counterpart of foreign borrowings and providing currency against purchases of foreign exchange.

The objective of the authorities' interest rate policy was the encouragement of financial savings and the efficient allocation of resources. Regulated deposit rates were to be at least equal to the rate of price increase while regulated loan rates were to be positive in real terms. The authorities also committed themselves to expand the nonregulated segment of the financial market and reduce the direct role of the Central Bank in the intermediation process.

A feature of the program was a monetary reform which included the introduction of a new currency unit, the austral (₳), equivalent to 1,000 pesos argentinos ($a). Existing peso currency holdings and demand deposits in the financial system were converted into australes at the rate of ₳ = $a 1,000. To avoid large windfall profits and losses for creditors and debtors as a result of a sudden unexpected decline in inflation, the reform included a system for convertion peso-denominated contracts (for example time deposits, loans, and rental agreements). For such contracts, a table of daily rates for converting pesos to australes was specified which implied a depreciation of the peso relative to the austral equal to the expected inflation presumed to be implicit in contracts agreed to prior to the reform.

3. Wage and price policies

In line with the policy of adjusting wages by 90 percent of the rate of inflation in the previous month, the Government decreed a wage increase in June of 22.6 percent. Following this adjustment wages and salaries in the public and private sectors were frozen. All prices in the economy were frozen as of June 13, 1985 and maximum prices were established for about 80 mass consumption items.

4. External objectives and policies

In addition to reducing domestic imbalances, the program also aimed at a strengthening of the balance of payments. It was expected that the current account would benefit from the exchange rate action prior to the pegging of the exchange rate to the U.S. dollar and from restrained demand policy. As noted above, the credit program was based on a cautious assumption about money demand which implied that remonetization of economy would have as counterpart inflows of capital from abroad. A better than expected balance of payments outturn was to enable an acceleration of the process of eliminating external payments arrears. The level of the exchange rate was judged to be broadly sufficient to attain the balance of payments objectives of the program but it was to be kept under close review in the light of balance of payments and parallel market developments.

5. Structural aspects of the program

The establishment of financial stability was expected to improve the efficiency of resource use in the economy. Economic decision making under conditions of high and variable inflation had been markedly suboptimal despite the existence of many indexing mechanisms. The maturity of financial instruments had become extremely short with adverse implications for medium- and long-term investment. Both businesses and individuals were forced to devote considerable economic resources to protect themselves from unexpected price changes. On the other hand, certain measures implemented under the program, such as the wage-price freeze, increases in export taxes, and the imposition of an import surcharge, were not costless in terms of allocative efficiency. However, all of these were to be applied on a temporary basis only. At the same time, the authorities had committed themselves to continue certain structurally-oriented programs such as the shifting of imports to the automatic approval list and the elimination of exchange restrictions on payments and transfers for services.

V. Policies and Developments Since the Plan

In the second half of 1985, the combined fiscal deficit declined substantially but it remained well above the target envisaged in the program. By the fourth quarter of 1985, the credit program went off track. Inflation came down sharply--the monthly rate of increase in the consumer price index fell from 31 percent in June 1985 to 6 percent in July 1985 and to an average of 2 1/2 percent from August 1985 to February 1986--but remained significant. An acceleration began in March 1986, and in the second half of the year high inflation again prevailed, though not as high as before the program began.

1. Developments in the second half of 1985

a. Demand policies

With the implementation of the program, the combined deficit of the public sector declined by some 9 percent of GDP, reflecting sharp cutbacks in both the cash deficit of the nonfinacial public sector and in the losses of the Central Bank. For the nonfinancial public sector the most important factors that contributed to the reduction were the increases in public sector prices prior to the introduction of the plan, the revenue measures (mainly the compulsory saving scheme and taxes on foreign trade) and the effect of lower inflation on the real value of tax collections. Sharply lower interest rates and the large increase in narrow money balances (a free resource to the Central Bank) improved the position of the Central Bank. Nonetheless, the fiscal deficit in the second half of 1985 was some 1 1/2 percent higher than had been programmed, on account of higher than projected spending, and domestic financing of the public sector continued.

Argentina: Policy Indicators

	Combined fiscal deficit (percent of GDP)	Monetary Growth (M1) (Average of monthly percentage rate of change) 1/	Real Effective Exchange Rate 2/ (1980=100)
1985 Q1	12.017.2	50.6	
Q2	12.825.4	44.3	
Q3	3.5 20.1	39.6	
Q4	5.1 7.4	41.8	
1986 Q1	4.7 3.7	43.7	
Q2	2.9 8.0	43.3	
Q3	1.7 3.6	43.9	
Q4	5.9 5.1	45.9	

1/ Seasonally adjusted.
2/ Increase means appreciation.

The rate of growth of monetary aggregates continued to be fairly high after June 1985. However, in the period immediately following the introduction of the program, the increase in the aggregates did not originate from the extension of net domestic credit by the Central Bank but in an improvement in net official international reserves. (In the third quarter of 1985, net international reserves increased by US$500 million compared with a decline of US$200 million envisaged in the program.) Subsequently, however, rediscounts proved difficult to control and by the fourth quarter of 1985 the growth of the monetary aggregates once again was associated with domestic credit creation. Following the introduction of the program, nominal interest rates in both regulated and free markets declined sharply but remained positive in real terms through the end of the year.

b. Real economic activity, wages, and prices

Real economic activity continued to decline through the third quarter of 1985 but a recovery started in the fourth quarter that continued through 1986 (Table 3). Consumer spending was the main factor contributing to the recovery; however, investment spending also began to recover in the fourth quarter of 1985, reversing a trend started in 1980.

Although the wage freeze introduced with the Austral Plan remained in force until the end of 1985, there were de facto wage adjustments as early as September 1985. For the second half of 1985, the official index of hourly wages in the industrial sector increased by 7 percent compared with a 250 percent increase during the first half of the year.

Argentina: Basic Data

			Real GDP at market prices 1/	CPI 2/	Real interest rate 3/	Exchange Rate Spread 4/
1985	Q1	-2.6	24.1	1.1	26.5	
	Q2	-2.5	28.4	0.3	18.0	
	Q3	-2.7	28.4	0.3	18.0	
	Q4	4.3	2.5	4.0	10.9	
1986	Q1	2.5	3.1	3.3	11.4	
	Q2	1.8	4.4	0.6	6.6	
	Q3	2.3	7.6	-1.0	10.3	
	Q4	...	5.4	3.6	18.8	

1/ Percentage change, actual rate; seasonally adjusted from previous quarter.
2/ Average of monthly changes.
3/ Average monthly rate against security of bonds of the Government of Argentina denominated in U.S. dollars, deflated by the average monthly rate of increase in the CPI and the WPI.
4/ Percentage difference in terms of australs per U.S. dollar between the rates in the parallel and official exchange markets.

c. External developments

The nominal exchange rate remained pegged to the U.S. dollar through March 1986. Against a basket of currencies of major trading partners, the real value of the austral changed little through November 1985, as the depreciation of the U.S. dollar against other currencies over the period offset the inflation deferential between Argentina and

Table 3. Argentina: Changes in Expenditure and Output

(Percentage change from previous year)

	1981	1982	1983	1984	1985	1985 I	1985 II	1985 III	1985 IV	1986 I	1986 II	1986 III
(In prices of 1970)												
GDP at market prices	-6.5	-5.2	3.4	2.4	-4.4	-1.0	-3.4	-7.8	-3.9	0.7	8.8	11.8
Gross domestic expenditures	-7.6	-11.6	1.8	3.2	-5.0	1.2	-7.7	-12.7	-5.8	1.5	12.0	17.2
Consumption	-3.2	-10.8	4.0	6.3	-6.1	-1.0	-6.7	-10.3	-3.5	1.0	13.8	14.7
Investment	-23.3	-15.4	-8.6	-13.4	-16.8	21.3	-13.7	-29.3	-29.1	-5.8	-0.6	35.8
Of which: fixed capital formation	-17.2	-24.6	-1.8	-11.5	-8.6	-5.1	-8.4	-9.4	-9.4	-4.7	12.2	23.0
Exports of goods and nonfactor services	7.9	1.5	8.4	-0.7	12.3	-8.4	15.1	17.0	12.3	-7.8	-13.5	-3.5
Imports of goods and nonfactor services	-3.8	-42.1	-4.7	6.3	-11.5	9.1	-13.9	-19.3	-21.5	-4.1	20.2	31.4

Source: Central Bank of Argentina.

its trading partners. However, as the inflationary differential persisted, the real exchange rate began to appreciate.

The external current account deficit in the second half of 1985 amounted to US$0.4 billion compared with a projected deficit of US$1.1 billion. Imports were lower than projected, partly on account of weak economic activity, while exports were somewhat higher than expected; interest payments declined owing to declining international interest rates. The surplus on the capital account also was some US$0.3 billion higher than projected. The overall balance of payments registered a small surplus compared with a projected deficit of close to US$1 billion for the period.

2. Developments in 1986

In 1986, the effort to lower further the public sector deficit as envisaged in the original program was generally not successful. The growth of monetary aggregates was higher than would have been consistent with reasonable price stability. In March 1986 inflation began to accelerate and by August 1986 consumer prices were rising at a monthly rate of about 9 percent.

At the beginning of 1986, the Government replaced the wage freeze by a system of wage guidelines for the private sector that were intended to be consistent with keeping inflation at a relatively low rate. In January 1986, the Government decreed a general 5 percent wage increase, with additional increases of up to 5 percent permitted in the private sector, if justified on productivity grounds. Average hourly wages rose by 7 1/2 percent in the first quarter of 1986.

The pick-up in inflation in March 1986 indicated that inflationary pressures continued to be present and the Government returned to the practice of adjusting the key relative prices on a regular basis. In early April 1986, the authorities abandoned the peg of the exchange rate to the U.S. dollar in favor of frequent (basically weekly) adjustments of the rate. Also in April 1986, the Government decreed an 8 1/2 percent general wage increase and indicated that labor contracts, which had not been formally revised since 1976, should be brought up to date. The average hourly wage in industry rose by 18 percent in the second quarter. Public sector prices also began to be adjusted.

In May 1986, the authorities liberalized the price control system, by allowing the enterprises to pass on to prices authorized increases in costs. 1/ Following the surge of inflation in August 1986, the authorities tightened monetary policy and intensified price controls; in reflection of these measures the rate of increase in consumer prices

1/ The authorized cost increases included wage adjustments in line with government guidelines, public sector price increases, and the effects of changes in the official exchange rate.

declined to below 5 percent in Decmeber 1986. 1/

In 1986, the balance of payments weakened. Significant real appreciation of the exchange rate persisted through most of the year. Exports were affected by low grain prices and flooding of crops in late 1985; imports rose strongly owing to a pick up in economic activity and the appreciation of the real exchange rate. There was only a marginal improvement in the capital account and the overall balance of payments deficit widened substantially.

VI. Summary

The program adopted in June 1985 succeeded in bringing down sharply the rate of increase in the price indices with apparently little cost in terms of output and employment. Nevertheless, the elimination of inflation--the original target of the program--was not achieved.

The combined public sector deficit declined markedly after mid-1985, but it remained well above the amount that had been programmed and domestic financing was required both in the second half of 1985 and in 1986. The fiscal effort underlying the reduction of the combined deficit was focused exclusively on revenue measures, many of which were of a once-and-for-all nature. The planned reductions in public expenditure did not materialize.

Monetary aggregates continued to grow fairly rapidly after June 1985. At first, the credit program was on track but by the fourth quarter of 1985, the growth of monetary aggregates began to be associated with domestic credit creation.

Another area where the authorities had experienced considerable difficulties was how to exit from the wage-price freeze without endangering progress achieved in reducing inflation. Originally it was hoped that wage and price controls could be lifted at an early date and the government would cease economy-wide wage adjustments. In the event, price and wage controls have remained in various forms.

1/ Following a resurgence of inflation in the first two months of 1987, the authorities, at the end of February 1987, reintroduced a general wage and price freeze.

Argentina's Relations with the Fund

In the latter part of 1982, the Argentinian authorities entered into negotiations with the Fund on an economic adjustment program that could be supported by a stand-by arrangement. 1/ The stand-by arrangment was approved by the Executive Board on January 24, 1983; it was for SDR 1,500 million and for the 15 months which coincided with the time that the then government was to be in office. Two purchases (one upon aproval and one based on performance criteria) were made under the arrangement, but by the second quarter of 1983, devations from the program rendered the arrangement inoperative.

The 1985-86 stand-by arrangement for the equivalent of SDR 1,419 million was negotiated in late 1984. The letter of intent was signed in September 1984, but owing to delays in assuring that the financing gap would be closed, the letter was not presented to the Executive Board until December 1984. Originally the program was to cover 18 months--i.e., from the fourth quarter of 1984 to the first quarter of 1986. Because of the delay, the program as approved covered only 15 months. A first purchase equivalent to SDR 236.5 million was made upon approval; however, several end-December 1984 performance criteria were not observed and in the early part of 1985 the program moved off-track. The first review of the program, originally scheduled to be completed by March 1985, was delayed. The stabilization program presented by the authorities on June 14, 1985 became the base for the completion of the review by the Executive Board on August 9, 1985. Two further purchases were made in the third quarter of 1985--one upon the completion of the review and the other upon observance of performance criteria for end-July 1985.

Several performance criteria for end-September were not observed, and there were delays in concluding the second review under the arrangement, which prevented the setting of some performance criteria for end-December 1985. In the event, the second review was completed on March 10, 1986 at which time the period of the arrangement was extended from March 27, 1985 to end-May 1986 and the amount of the arrangement was reduced by the amount of one previously scheduled purchase. There was a further purchase made upon conclusion of the second review which required waivers for the nonobservance of several perforamnce criteria. Several end-March performance criteria were not adhered to and at end-May 1986, the Executive Board extended the period of the arrangement to end-June 1986 to allow for the continuation of discussions with the authorities on the implementation of the program. On June 23, 1986, the Executive Board waived the nonobservance of the performance criteria and released the last purchase under the arrangement.

1/ There had been several stand-by arrangements in the 1970s with the last one expiring in September 1978 under which no purchases were made.

On February 18, 1987 the Executive Board approved in principle a 15-month stand-by arrangement in the amount of SDR 1,113 million (100 percent of quota).

Argentina: Selected Economic and Financial Indicators

	1983	1984	1985	1986
	(Annual percentage change, unless otherwise specified)			
National income and prices				
GDP at constant prices	2.8	1.2	-3.3	5.7
GDP deflator	348.3	655.7	675.0	77.6
Consumer prices (end of period)	433.7	688.0	385.4	81.9
General government 1/				
Receipts	371.5	654.5	776.0	96.0
Outlays	439.3	578.0	637.5	81.8
External sector (U.S. dollar basis)				
Exports, f.o.b.	2.8	3.5	3.6	-17.9
Imports, c.i.f.	-15.6	1.8	-16.8	23.2
Export volume	14.7	-2.1	16.1	-13.2
Import volume	-9.9	4.5	-19.7	20.2
Terms of trade (deterioration -)	-4.3	8.4	-12.9	-8.6
Nominal effective exchange rate 2/ average (depreciation -)	-77.3	-77.8	-87.5	-55.0
Real effective exchange rate 2/ average (depreciation -)	-15.4	17.7	-11.7	0.5
year-end (depreciation -)	22.0	8.8	-14.9	10.5
Money and credit				
Domestic credit (net) 3/	420.6	561.2	322.2	97.7
Private sector	287.0	378.2	213.7	60.7
Other	133.6	183.0	108.4	37.1
Financial liabilities to private sector	354.7	527.4	320.2	84.4
Velocity (GDP relative to private sector liabilities)	36.3	29.2	22.7	-42.6
Interest rate (compounded annual rate, 30-day deposits)	273.1	380.4	301.7	61.2
	(In percent of GDP)			
General government deficit 1/	11.7	7.9	3.4	1.4
Nonfinancial public sector deficit 1/	11.1	8.3	4.8	2.9
Domestic financing 4/	14.9	6.1	8.2	2.6
External financing	-3.8	2.2	-3.5	0.3
Operating losses of Central Bank	1.1	2.5	2.2	1.6
Combined public sector deficit	12.2	10.8	7.0	4.2
Gross investment	17.9	15.9	13.5	15.1
Gross national saving	14.0	11.6	12.4	11.6
Balance of payments current account (deficit -) 5/	-4.0	-3.6	-1.5	-3.8
External debt 5/6/	71.4	69.7	70.9	64.6
Inclusive of Fund credit	73.3	71.4	74.8	69.3
	(In percent of exports of goods and nonfactor services)			
Debt service 7/	125.8	115.5	91.9	109.7
Interest on external debt 7/	56.9	55.2	50.1	48.9
	(In billions of U.S. dollars)			
Current account of balance of payments	-2.5	-2.4	-1.0	-2.8
Overall balance of payments	-2.6	-1.7	-0.7	-2.1
Gross official reserves (months of imports)	7.3	7.2	14.6	9.8
External payments arrears	3.2	4.2	1.6	0.5

Sources: Ministry of Economy; Central Bank of Argentina; and Fund staff estimates.

1/ Cash basis.
2/ Measured in terms of foreign exchange per unit of local currency.
3/ Changes in stocks during year relative to liabilities to the private sector at the begining of the year.
4/ Includes changes in external arrears and external financing to nonfinancial public sector channeled through Central Bank.
5/ GDP in current U.S. dollars is derived by converting GDP in australes using the U.S. dollar/austral exchange rate that would maintain the rate at its real level in the second half of 1985.
6/ Public and private debt, including short term.
7/ Data indicate amounts due, not amounts actually paid.

Part B. Recent Experience with Inflation Stabilization in Bolivia

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I. Introduction

Bolivia initiated a stabilization program on August 29, 1985, shortly after a newly elected government took office. The new program was aimed at stopping the hyperinflation that the country had experienced in the recent past, and eliminating the severe domestic and external imbalances in the Bolivian economy. It marked a complete change of monetary, fiscal, and exchange rate policy, with the lifting of price controls, freeing of interest rates and of the official exchange rate, and complete elimination of Central Bank financing of the nonfinancial public sector. At the same time, a liberalization of the foreign trade regime was announced.

The authorities designed and introduced this comprehensive package in a short time, with the main measures included in a Supreme Decree 1/ issued less than a month after the government's inauguration. Such an approach had been advocated by Fund staff during an Article IV consultation mission shortly before the elections in June-July 1985, and technical assistance was provided in August 1985 on the operation of the auction system. Negotiations on a stand-by arrangement were initiated in September and provisionally concluded in December 1985. After some policy slippages during December 1985-January 1986 and a change in the economic team in early 1986, a further mission took place and a Fund stand-by arrangement was subsequently approved by the Executive Board in June 1986.

The initial measures of August 1985 were almost immediately successful in reducing inflation sharply and, after a depreciation of the official exchange rate that brought it in line with the parallel market rate, in achieving exchange rate stability. Although a temporary relaxation of policy in the period December 1985 to January 1986 led to a new burst of inflation and exchange rate depreciation, the Government subsequently tightened policies, and inflation subsided again. In the second half of 1986, inflation averaged 1 percent a month; after an acceleration to just over 2 percent in January 1987, inflation in February was again close to 1 percent.

However, at the same time as this success has been achieved in combating inflation, the Bolivian economy has suffered from a sharp deterioration in the terms of trade, and the balance of payments outlook remains precarious. Although net international reserves of the Central Bank increased substantially during the year following the stabilization program, there has been significant pressure on reserves since late 1986. Moreover, although declining, real interest rates remain high and the deep recession that followed the external shocks of the 1985 collapse of the tin market, the 1986 decline in export receipts from natural gas, and the impact of the operations to suppress production of

1/ Supreme Decree No. 21060.

coca leaf has continued.

This note describes the inflationary process in Bolivia (Section II), provides a brief summary of previous stabilization efforts (Section III), explains the key features of the 1985 economic policy (Section IV), and describes the results of the policy so far. (Section V).

II. The Nature of the Inflationary Process in Bolivia

The recent hyperinflation in Bolivia took hold over a relatively short period and was accompanied by a large decline in recorded economic activity; an apparent shift of many economic transactions out of the official, regulated economy; considerable social and political unrest that involved frequent disruptions to production; and a sharp deterioration in Bolivia's external accounts and in its access to foreign financing. In response to external difficulties, the Bolivian authorities first imposed and subsequently tightened exchange and trade restrictions. Large external payments arrears were built up which, by the time of the initiation of the new economic policy in mid-1985, amounted to about US$1 billion, or the equivalent of about 25 percent of GDP.

Inflation began to accelerate in 1982, as a reduction in voluntary financing from overseas was accompanied by continued expansionary domestic policies. External financing 1/ of the public sector deficit dropped from 13 percent of GDP in 1981 to less than 1 percent in 1982. Public spending and revenues were not adjusted correspondingly; indeed, revenues fell and expenditure increased in relation to GDP. Thus, the fiscal deficit was financed with recourse to central bank credit. Although the official exchange rate remained fixed, the deterioration in the balance of payments fed through to domestic prices via a sharp depreciation in the parallel market exchange rate. A tightening of exchange controls in response to balance of payments pressures encouraged the diversion of trade from official markets into informal channels, further reducing government revenues.

Monetary policy accommodated the accelerating inflation, and real interest rates became heavily negative. During the inflationary period, real balances of domestic currency declined sharply, as cash holdings in U.S. dollars became an attractive alternative to pesos, or peso-denominated assets, leading to severe disintermediation in the financial system.

Real GDP stagnated in 1981 and then declined by 5 percent in 1982. As the economic crisis deepened, further declines in real output were recorded during 1983-85 (Table 1). To some extent, the official data may reflect a shift of activity out of the formal, recorded sector,

1/ Including arrears on interest.

Table 1. Bolivia: Demand and Supply, 1981-1986

	1981	1982	1983	1984	1985	Est. 1986
	(Percent change at constant prices)					
Real GDP						
Factor cost	0.2	-4.8	-7.3	-3.2	-4.1	-2.9
Market prices	-0.4	-5.6	-7.2	-2.4	-4.0	-2.9
Terms of trade	0.9	-0.2	3.3	-0.8	2.2	-25.0
	(Percent of GDP)					
Total domestic demand	102.4	96.2	97.2	96.7	99.0	102.1
Consumption	90.0	86.4	93.6	90.3	94.8	92.6
Investment, gross	12.4	9.8	3.6	6.4	4.2	9.5
Of which:						
Fixed capital formation	11.8	11.6	7.0	5.3	5.0	10.2
Nonfinancial public sector	(7.5)	(7.5)	(5.7)	(4.6)	(3.8)	(5.5)
Private sector	(4.3)	(4.2)	(1.4)	(0.7)	(1.2)	(4.7)
Savings = investment	12.4	9.8	3.6	6.4	4.2	9.5
National	0.6	6.0	-0.3	2.8	-3.8	0.9
Public	(-0.8)	(-9.0)	(-17.9)	(-23.8)	(-8.9)	(1.7)
Private	(1.4)	(15.0)	(17.6)	(26.6)	(5.1)	(-0.8)
Foreign	11.8	3.8	3.9	3.6	8.0	8.6
Memorandum items:						
Exports (goods and nonfactor services)	16.3	15.6	14.4	12.4	15.0	16.2
Imports (goods and nonfactor services)	-18.7	-11.7	-11.6	-9.1	-14.0	-18.3

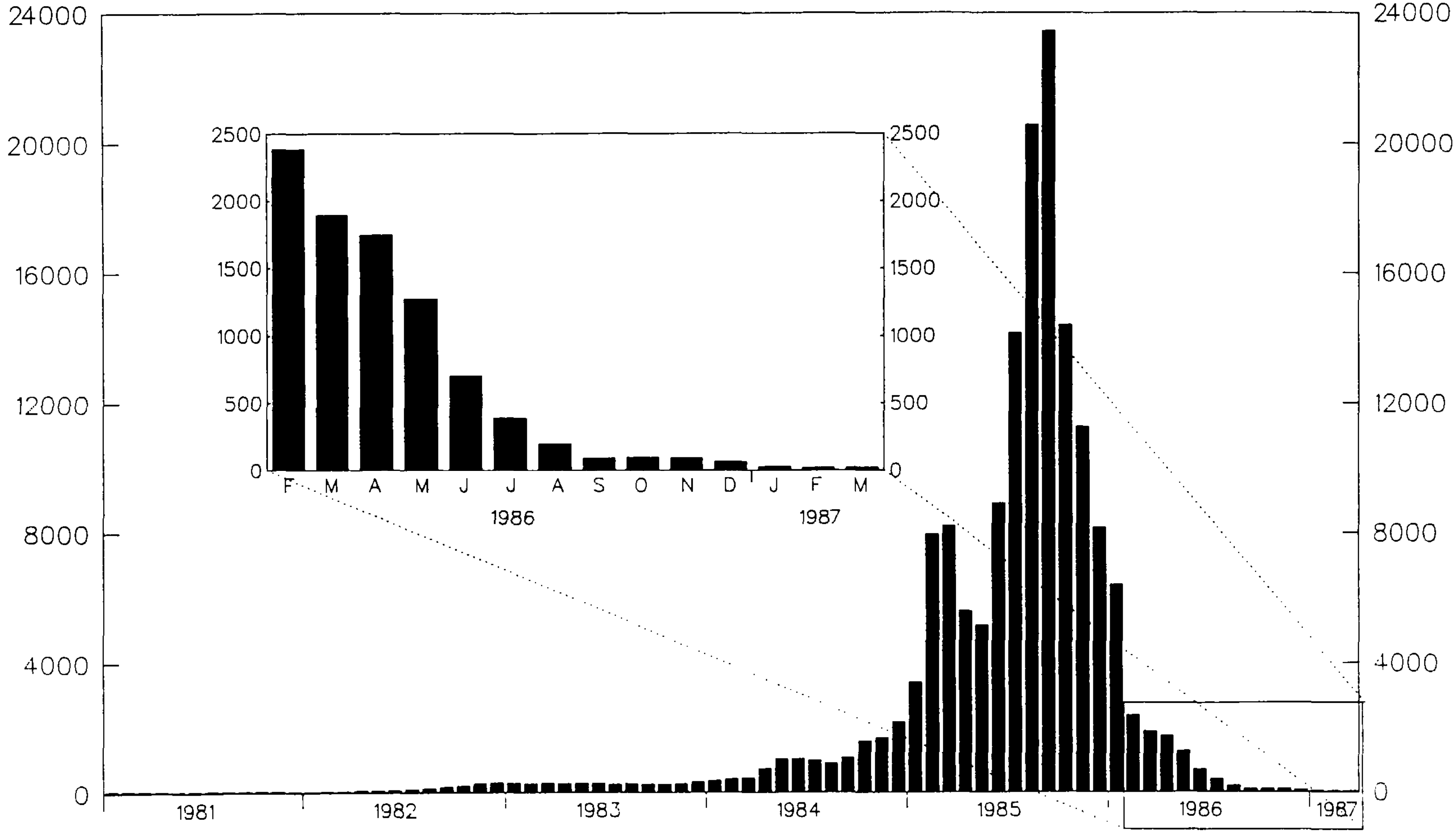
Sources: Central Bank of Bolivia; Ministry of Finance; and Fund staff estimates.

CHART 1

BOLIVIA

CONSUMER PRICE INCREASES

(Percent change over the corresponding month of preceding year)



Sources: National Institute of Statistics; and Fund staff estimates.

thus overstating the weakness in the economy. However, it would appear that the lack of coherent economic policies, together with adverse supply shocks (including bad weather in 1983 and frequent work stoppages throughout the period) did contribute to a decline in real output, the extent of which may be hard to measure.

The rate of price increase, which had averaged about 20-25 percent a year between 1973-81 (with a spike in 1979-80), accelerated during 1982 to almost 300 percent on a 12 month basis (124 percent annual average). Inflation accelerated further to 329 percent during 1983, 2,177 percent during 1984, and almost 24,000 percent in the year to September 1985 (Chart 1). 1/

While the overall inflationary trend was clear, there was also considerable volatility from month to month in price changes (Table 2). During 1984, monthly inflation rates had varied from as low as 4-5 percent in June-July to as much as 60 percent in April, October, and December. In the first eight months of 1985, before the introduction of the economic plan, the monthly inflation rate remained above 65 percent except for the period from March to May. A strike at that time by employees of the Central Bank prevented the timely payment of public sector wages and caused a sharp deceleration in inflation.

As in other cases, the inflationary process in Bolivia involved various factors, some of which are not easily measurable. It is, in particular, difficult to disentangle the factors that may be a source of inflation, such as the fiscal deficit and its financing, and those which seem to perpetuate a given inflation rate. In the Bolivian case, there was no indexing of financial assets and, while wages were partly indexed to prices for much of the inflationary period, there were still large--but short-lived--swings in relative prices, particularly as inflation accelerated (Table 3).

1. Background and external environment

During the period 1976-81, public sector deficits averaged more than 9 percent of GDP. The Bolivian economy experienced declining rates of economic growth, widening external current account deficits, an overvalued exchange rate, and declining domestic savings and investment. Investment dropped from over 20 percent of GDP on average between 1976-78 to 15 percent of GDP in 1979-81, while national savings were halved from 16 percent of GDP in 1976-78 to below 8 percent in 1979-81. Considerable political disruption weakened attempts to design and implement consistent economic policies. However, for much of this period, the availability of foreign financing meant that the continuing imbalances could be financed and adjustment avoided.

1/ On an annual average basis, inflation was 276 percent in 1983, 1,281 percent in 1984, and 11,750 percent in 1985.

Table 2. Bolivia: Recent Inflation Indicators 1/

(Percent change)

	From Previous Month			From 12 Months Earlier		
	1985	1986	1987	1985	1986	1987
January	68.8	33.0	2.1	3,408	6,416	27
February	182.8	8.0	1.1	7,964	2,388	20
March	24.9	0.1	0.8	8,217	1,892	19
April	11.9	3.6	...	5,604	1,746	...
May	35.6	1.0	...	5,164	1,274	...
June	78.5	4.3	...	8,927	703	...
July	66.3	1.8	...	14,173	391	...
August	66.4	0.7	...	20,563	197	...
September	56.5	2.3	...	23,447	94	...
October	-2.0	0.6	...	14,401	99	...
November	3.2	-0.1	...	11,247	93	...
December	17.0	0.7	...	8,163	66	...

Source: Central Bank of Bolivia.

1/ Based on the consumer price index for La Paz only.

the availability of foreign financing for the public sector, reduced export earnings, and severe delays in the receipt of export proceeds from natural gas. The burden of servicing the considerable amount of external debt on commercial terms rose sharply, as interest rates climbed and recorded export earnings declined.

During 1976-80, rising export prices had masked the impact on export earnings of a sustained decline in export volumes. A reversal of the terms of trade gains contributed to a drop in export values in 1982 that continued throughout the first half of the decade. A particularly sharp decline was recorded in exports of nontraditional goods ($150 million in 1980 to $80 million in 1982 and $30 million in 1984), and metals ($640 million in 1980, declining to $420 million by 1982 and $365 million by 1984), a large part of which may be attributable to increased smuggling.

Debt service obligations rose to about 60 percent of exports of goods and nonfactor services in 1981, from just over 40 percent in 1980, with interest obligations alone increasing from 25 percent to 35 percent of exports (including obligations on short-term and private debt). In 1982, total obligations rose further to 75 percent of exports, of which 42 percent was interest. Bolivia stopped servicing in full its foreign debt to commercial banks and some bilateral suppliers during 1982; after a temporary deferment agreement with commercial bank creditors in 1983, debt service payments to banks stopped again in March 1984, and a moratorium on these payments was declared in June 1984.

2. Fiscal imbalances

The rapidly growing deficit of the nonfinancial public sector and accommodating monetary policy clearly played an important role in the inflationary episode of 1982-85. The already large imbalances during the preceding period widened in 1982-84. Moreover, the drying up of external financing in the early 1980s was reflected in increased Government recourse to Central Bank credit to finance the fiscal deficit. The lack of a developed financial market, in particular the absence of a bond market, meant that there were no other sources of domestic financing, and the Government failed to adjust revenues or expenditure in response to the loss of external financing.

a. Developments 1981-84

The public sector in Bolivia played an increasingly important role in the economy from the early 1950s, through direct participation in the production of goods (e.g., mining, including hydrocarbons, and manufacturing, including processing of agricultural goods) and services (transport, communication, banking, and energy), and through the gradual intensification of controls over private sector economic activity. During the inflationary period 1982-85, this role expanded with, in particular, a rapid rise in public sector employment, in public expenditures relative to GDP, and in the deficit of the nonfinancial public sector.

The overall fiscal deficit almost doubled to 16 percent of GDP in 1982 and then rose to more than 28 percent of GDP in 1984 (Chart 2 and Table 4). The increase in public expenditure during 1981-84 was centered in the General Government, and largely reflected a sharp increase in the wage bill as a result of increased employment and across-the-board real wage increases. By end-1984, public sector employment accounted for about a quarter of nonagricultural employment. The rise in recorded expenditure was due to some extent to increased debt service obligations, which may, however, be overstated because of accounting difficulties involving external debt payments made by the Central Bank on behalf of the Government.

Inflation itself played a part in exacerbating the deterioration in public sector finances. It contributed to a sharp reduction in revenues from specific taxes, on which the tax base relied heavily, and to an erosion in the value of other taxes which were paid with a lag after the period in which the tax liability occurred. Moreover, the interaction between accelerating inflation and the Government's exchange rate and pricing policies led to a marked decline in tax receipts from international transactions--as these were increasingly carried out through the informal market--and to sharply higher subsidies on the goods and services supplied by the public sector at controlled prices. This period was also characterized by a general weakening of tax administration, especially evident in collections of internal taxes and import duties.

b. Budgetary and financial control

The weakening tax administration was one aspect of a more general breakdown in institutional management and control in the public sector. This, together with the growth in the informal and untaxed economy, worsened the fiscal position further and contributed to the inflationary financing of increasingly large budget deficits.

The public sector's size and complexity was an important factor in the loss of central control over spending and revenues. The financial relationships within the nonfinancial public sector and with the rest of the economy are complex, and the data and reporting systems needed to exert effective control were lacking. Official statistics on the operations of the public sector have suffered for many years from incomplete coverage, inconsistent accounting methods (e.g., the mixing of cash and accrual concepts), and large discrepancies between reported payments and receipts of intrasectoral transfers. These problems were compounded in the first half of the decade by a rapid turnover of technical and supervisory staff, frequent strikes in the public sector, and the weakening control of the Central Administration over large segments of the rest of the public sector.

The most notable loss of control occurred within the state enterprises, which were often reluctant to divulge any information about

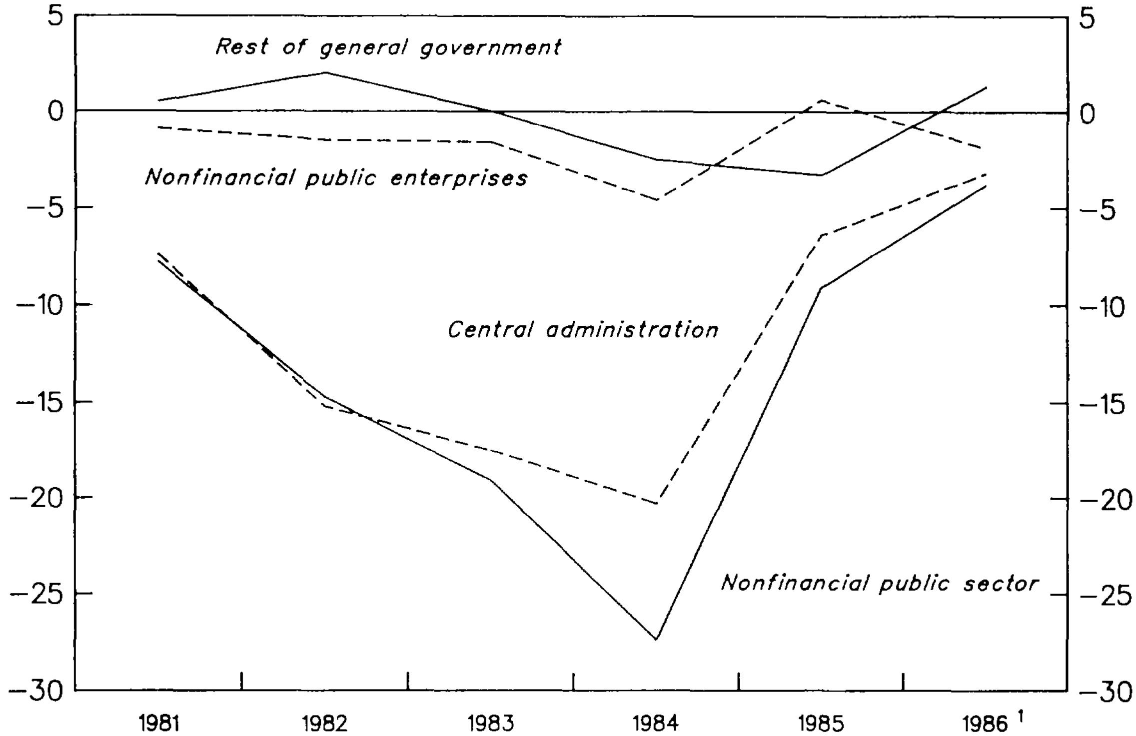
CHART 2

BOLIVIA

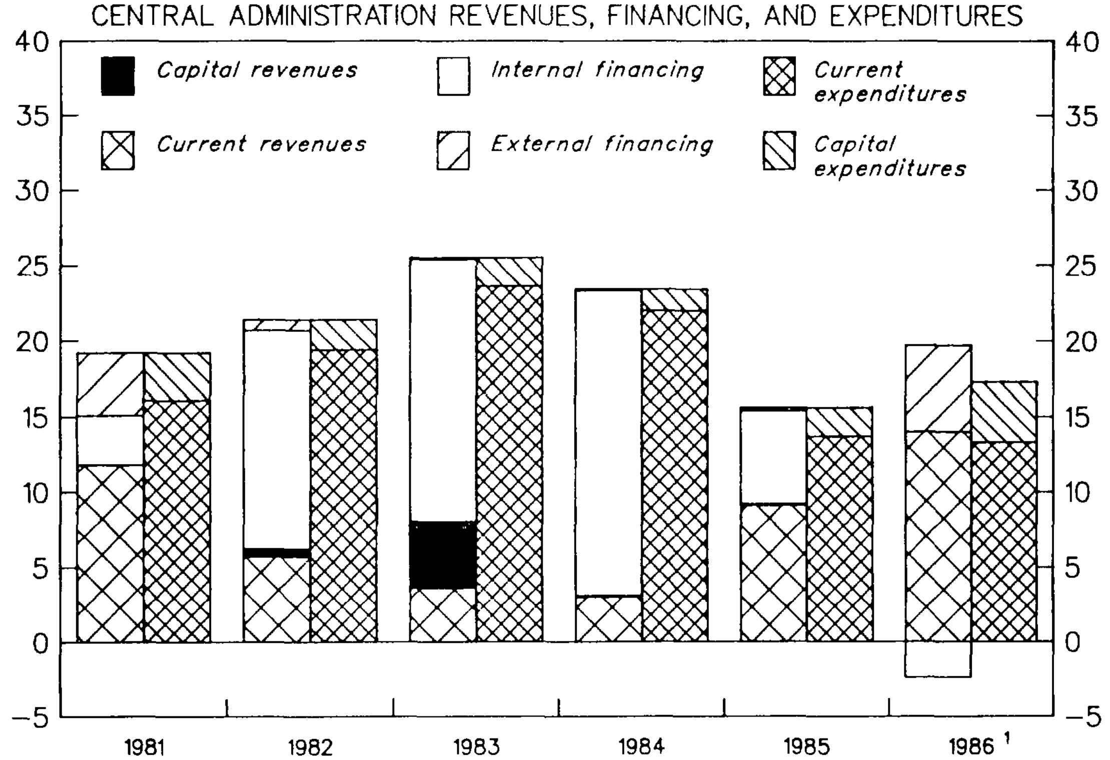
NONFINANCIAL PUBLIC SECTOR OPERATIONS

(In percent of GDP)

DEFICITS OF THE NONFINANCIAL PUBLIC SECTOR



CENTRAL ADMINISTRATION REVENUES, FINANCING, AND EXPENDITURES



Sources: Central Bank of Bolivia; and Fund staff estimates.

[1] Estimated.

Table 4. Bolivia: Summary of Nonfinancial Public Sector Operations, 1982-86 1/

(In percent of GDP)

	1982	1983	1984	1985	Prog. 1986
Total nonfinancial public sector revenue	14.4	12.7	4.9	12.8	19.2
General Government (total)	11.5	11.3	4.8	11.3	19.2
Current revenue	(10.9)	(6.9)	(4.6)	(11.1)	(19.2)
Of which: transfers from state enterprises	[4.1]	[2.3]	[2.4]	[7.7]	[12.2]
Capital revenue and foreign grants	(0.6)	(4.4)	(0.1)	(0.2)	(--)
Nonfinancial state enterprises (total)	2.9	1.4	0.2	1.5	--
Operating surplus	(2.8)	(1.2)	(--)	(1.4)	(--)
Capital revenue and grants	(0.1)	(0.2)	(0.2)	(0.1)	(--)
Total nonfinancial public sector expenditure	30.4	31.9	33.0	25.1	23.0
General Government (total)	25.7	28.9	28.1	23.7	21.1
Current expenditure	(22.6)	(26.1)	(25.9)	(21.5)	(17.1)
Capital expenditure	(2.9)	(2.8)	(2.2)	(2.2)	(3.9)
Net lending	(0.2)	(--)	(--)	(--)	(--)
Nonfinancial state enterprises (total)	4.6	3.0	4.9	1.4	1.9
Operating deficit	(--)	(--)	(2.5)	(--)	(0.4)
Capital expenditure	(4.6)	(3.0)	(2.4)	(1.4)	(1.5)
Net lending	(--)	(--)	(--)	(--)	(--)
Consolidated nonfinancial public sector overall surplus or deficit (-)	-16.0	-19.2	-28.1	-12.4	-3.8
Financing	16.0	19.2	28.1	12.4	3.8
External financing (net) 2/	0.1	-0.8	5.8	4.8	5.6
Internal financing (net)	15.9	20.0	22.3	7.6	-1.9
Memorandum items:					
Consolidated nonfinancial public sector savings	-8.9	-18.0	-23.8	-9.0	1.7
Consolidated nonfinancial public sector deficit on a cash basis	-14.7	-19.1	-27.4	-9.1	-0.2

Sources: Ministry of Finance; Central Bank of Bolivia; and Fund staff estimates.

1/ Includes unpaid interest and net of intrasectoral transfers; details may not add up to totals because of rounding.

2/ Includes exceptional financing.

their operations. More generally, these enterprises--whose combined gross revenues and expenditures were equivalent to between a quarter and a third of GDP--increasingly conducted their operations without regard to government policies. The two most important state enterprises in Bolivia are the state petroleum enterprise (YPFB) and the state mining enterprise (COMIBOL). Tax payments to the Central Government from the state petroleum company declined from almost 3 percent of GDP in 1981 to only 0.3 percent of GDP in 1984. This partly reflected financial difficulties due to payments arrears built up by Argentina on Bolivia's gas exports, but a sharp rise in operational costs, associated with large wage increases and employment increases, was another contributing factor. The number of YPFB employees increased from about 4,500 in 1980 to about 8,000 in 1984, while production decreased somewhat.

The state mining enterprise also increased employment sharply during 1981-84, at a time when output was falling. Frequent work stoppages contributed to the decline in production, while labor costs and other social benefits (including highly subsidized company stores) increased their share of total expenditure from about 25 percent in 1981 to about 35 percent in 1984. After 1983, the state mining sector virtually stopped paying taxes to the Treasury, reflecting both financial difficulties and the progressive loss of control by the Central Administration.

The role of the Central Bank, which as fiscal agent to the public sector financed the growing deficits of both the General Government and the state enterprises, was also an important one in the inflationary process. The Central Bank became highly politicized during the period 1982-85 and, on occasion, strikes were called in order to protest the implementation of government policies, such as a change in the exchange rate. The Treasury became unable to control the expenditures and deficit of any government agency or institution if such control was opposed by the Central Bank.

3. Monetary policy

Before 1985, the Central Bank intervened in the economy by regulating interest and exchange rates, pursuing selective credit policies, tightening capital controls, and financing the large public sector deficit. Foreign trade financing and U.S. dollar transactions between residents were prohibited. The monetary policy conducted during the inflationary period accommodated the fiscal and other imbalances that were driving inflation. Bank credit expanded rapidly to accommodate the rising financial requirements of the nonfinancial public sector, and exceeded the private sector's demand for public sector financial assets (Table 5). The credit expansion was accompanied by a rapid increase in currency issue, which rose by more than 2,000 percent in 1984 and by a further 1,000 percent in the first half of 1985. Although prices rose more rapidly than currency issue, the two appeared quite closely linked. For example, during a strike of Central Bank employees in 1984, wage payments to public sector workers were delayed, currency issue

Table 5. Bolivia: Selected Monetary Indicators, 1982-86

	1982	1983	1984	1985	Prog. 1986
	(Percentage change) 1/				
Credit to nonfinancial public sector	204	256	1,483	3,891	-139
Credit to private sector	233	104	465	4,249	133
	(End of period stock in billions of Bolivian pesos)				
Money and quasi-money	88	256	3,874	285,638	525,600
Money	57	178	3,347	208,765	262,100
Quasi-money	31	78	527	76,873	263,600
	(End of period stock in billions of 1980 Bolivian pesos)				
Money and quasi-money	18.6	11.6	7.8	7.0	7.8
Money	12.1	8.1	6.7	5.1	3.9
Quasi-money	6.5	3.5	1.1	1.9	3.9
	(GDP/liabilities to private sector) 2/				
Velocity	6.9	8.1	17.8	26.5	15.7

Sources: Central Bank of Bolivia; and Fund staff estimates.

1/ Annual effective flows of credit in relation to liabilities to private sector at the beginning of the period.
2/ Calculated as a period average.

slowed and inflation dropped sharply.

Accelerating inflation, together with the distortions in relative prices, particularly exchange and interest rates, led to a dramatic shift in financial savings from local currency assets to cash holdings of U.S. dollars. Financial assets denominated in Bolivian pesos declined by 66 percent in real terms from 1983 to 1985. At the same time, the growth of money and quasi-money in nominal terms accelerated to close to 200 percent in 1983, 1,400 percent in 1984, and over 7,000 percent in 1985.

a. Institutional arrangements

The Central Bank had a dominant role in domestic financial intermediation. In addition to its role as the fiscal agent of the nonfinancial public sector, the Central Bank pursued a selective credit policy through special lines of credit. In the period before the August 1985 measures, these lines of credit had different interest rates and spreads in favor of the intermediating bank, depending on the degree of incentive the authorities intended to extend to individual sectors and activities. In general, the rates were heavily negative in real terms. Moreover, until early 1985, the Central Bank extended credit only in domestic currency. Since a significant portion of these loans were funded from abroad, the Central Bank carried the exchange rate risk and absorbed any exchange rate losses.

A further inflationary factor was that the lending operations of the state banks were conducted largely outside the control of the Central Bank during 1982-85.

Central Bank enforcement of legal reserve requirements was also sporadic. During the inflationary period, the Central Bank allowed banks to hold as much as 80 percent of the legal reserve requirements in the form of cash in vault because of the difficulty in transporting the large amounts of currency notes between banks and the Central Bank. In practice, legal reserve requirements were often not observed. This problem persisted in the early part of the stabilization program.

b. Systemic weaknesses

Commercial banks in Bolivia have been closely associated with the major private sector economic groups, so that some banks suffer from a high concentration of loans to individual customers. The nonperforming portfolio of private commercial banks increased from 18 percent of total loans at the end of December 1984 to more than 30 percent by the end of March 1985.

The financial position of the commercial banks was also weakened, after September 1982, by the introduction of Central Bank regulation of interest rates and of the spread on financial operations. To some extent, banks mitigated the impact of the regulations by charging front-end commissions and other fees on loans. However, a drastic decline in the deposit base, caused at least in part by the adverse impact of regulated deposit rates that were far below the rate of inflation, outweighed this. The decline in the deposit base was unmatched by any reduction in overhead costs.

In addition, the de-dollarization of the banking system in November 1982 severely weakened the banks. Under this policy, financial institutions were required to accept repayment of U.S. dollar-denominated loans at the previous, more appreciated, exchange rate after a devaluation, while their foreign currency liabilities were revalued at the new official exchange rate.

c. Declining money demand

As inflation accelerated in 1982-84, cash holdings in U.S. dollars and real assets became increasingly attractive alternatives to peso-denominated assets, and the economy experienced a sharp decline in money demand. As foreign currency denominated deposits were no longer allowed, money balances were held increasingly in the form of U.S. dollar bills purchased in the parallel exchange market and U.S. dollar deposits abroad. Real balances in domestic currency declined steadily and velocity accelerated sharply, increasing fourfold from 1982 to 1985. At the end of September 1985, real money and quasi-money stood at only 50 percent of the level recorded at the end of 1983. The shrinking monetary base exacerbated the difficulties of monetary control. At the time of the introduction of the August 1985 measures, money (currency issue and demand deposits) was equivalent to less than 5 percent of GDP, compared to over 10 percent of GDP in 1980. The total value of all deposits in the banking system in August 1985 was US$27 million, or 1.4 percent of GDP.

At the same time, the share of currency in circulation in total money and quasi-money doubled between the end of 1981 and the end of 1984. The pronounced shift towards currency reflected the growth in informal sector activities, the increased risk of temporary inaccessibility of funds deposited with banks as a result of a proliferation of bank strikes, and the fact that such liquidity facilitated the shift from peso assets into U.S. dollars and real assets.

d. Interest rate policy

Bolivia has a tradition of regulating interest rates. During the 1980s, this led to increasingly negative real interest rates, exacerbating the decline in the real value of deposits in the banking system. Although minimum rates on savings and time deposits were raised from time to time, these increases lagged behind inflation. As inflation accelerated, the distortions grew. The annual rate on time deposits, for example, was increased, in several steps, from 30 percent in 1981 to 140 percent in mid-1984. But, by comparison, the annual inflation rate rose from 32 percent in 1981 to more than 1,200 percent in 1984.

In March 1985, the Central Bank introduced monthly, rather than annual, minimum deposit rates in response to a shortening of deposit maturities. At the same time, maximum lending rates, which had been increased gradually to 150 percent a year by mid-1984, were fully liberalized. However, the prescribed minimum deposit rates remained significantly below prevailing inflation rates and the lack of competition among financial institutions meant that banks maximized their spreads, and the deposit rate minima were not substantially exceeded. The disintermediation of the financial system thus continued. The use of differential interest rates, as described above, to encourage or promote particular credit uses was a further distortion in the economy.

4. Wage, price, and exchange rate policy

a. Wages

From October 1982 to August 1985, wage increases were negotiated--often in the context of general strikes--between the Government and the nationwide labor federation, and then implemented across all sectors. Often, major increases were granted in the form of bonus payments, paid for a variety of purposes. It is difficult to gauge the role of wage policy in the inflationary process, as statistics are not available for combined wage and bonus payments at income levels above the national minimum, and it is not clear whether wages led or lagged prices. However, in November 1984, there was a large wage adjustment which clearly fueled inflation; the minimum wage was raised by 655 percent in nominal terms. Moreover, it would appear more generally that the failure to enforce a sustained cut in real wages in response to declining national income did exacerbate inflationary pressures during 1982-85.

Government policy aimed at maintaining the purchasing power of low-income earners. Thus, after March 1983, the minimum wage was formally linked to previous price increases, while other wages were increased by an equal absolute amount, leading to severe compression of wage differentials. After April 1984, wage differentials were widened again and equal percentage increases were granted across the income scale. The lag between price increases and wage increases under the indexing formula was shortened from six months to four months in April 1984, and then to one month from May 1985 onward.

As inflation accelerated, the real minimum wage fluctuated considerably, especially between mid-1984 and late 1985, increasing, for example, by about 500 percent in November 1984 in response to the nominal adjustment described above, but then falling back to its previous level three months later, as inflation accelerated and prices caught up again.

b. Price controls

Before August 1985, 43 percent of the goods and services in the consumer price index were subject to price controls. However, it was increasingly difficult to enforce these controls for goods and services not sold by the public sector. The attempt to enforce price controls, particularly in the agricultural sector, contributed to increased black market prices, as it encouraged a reduction in production and a shift of the available supply to clandestine exports thus creating lasting scarcities. To some extent, supply was also shifted to the domestic black market. Prices could be further raised in this market by hoarding in anticipation of official price increases. Conversely, increases in officially controlled prices sometimes contributed to a reduction in inflation, as premia on controlled food items in the black market dropped sharply in response to the increase in controlled prices, which led suppliers to release hoarded goods.

c. Exchange rate

The fixed exchange rate system, with infrequent and lagging adjustments during a period of rapid inflation, not only led to a severe deterioration in international competitiveness, but also encouraged a large shift of transactions into the parallel market for foreign exchange. Although the official exchange rate was depreciated 8 times between the beginning of 1982 and the middle of 1985, with 4 of these changes during the 12 months to mid-1985, these adjustments were insufficient to offset inflation, and the real effective exchange rate appreciated by more than 500 percent in local currency terms over the period.

The fixed rate had no apparent impact in slowing down inflation. Rather, the parallel market for foreign exchange played an important part in the transmission of inflation during the period 1981-85. The parallel rate depreciated by some 340 percent in local currency terms during 1983 and by over 10,000 percent in the year to mid-1985. Changes in the rate were typically reflected quickly in retail prices in the main cities. As the U.S. dollar became increasingly the numeraire for transactions, the prices of nontradeable goods, such as market produce, also moved in line with the parallel exchange rate. At the same time, the parallel market rate itself reacted sharply to changes in Government policy and, in particular, to failures in proposed stabilization measures and to the awarding of large wage increases, typically after a strike.

III. Previous Stabilization Efforts

During the period October 1982 to July 1985, the Bolivian authorities adopted six stabilization packages. 1/ None of these was supported by an arrangement to use Fund resources. In each case, the measures implemented failed to reduce the deficit of the nonfinancial public sector, as key elements, such as tax measures and expenditure cuts, were either missing or later diluted because of political opposition. Generally, the stabilization attempts included a round of increases in controlled prices, a devaluation of the official exchange rate, and adjustment in the interest rate ceilings. Congressional opposition to tax increases led the authorities to attempt to protect the real value of tax collections by indexing certain tax liabilities. Typically, however, the fiscal measures included in the stabilization packages fell far short of what was needed to reduce the budget deficit to a level that could be financed without inflation, and to inspire confidence in the Government's economic management. Although some of the stabilization packages, for example in April 1984, had a temporary impact on inflation, none was successful for more than a limited period of time.

The stabilization packages were typically undermined by subsequent wage increases, which reversed the real adjustments included in the packages, as well as by the failure to tackle the fiscal imbalance. On some occasions, measures were reversed after opposition, sometimes involving prolonged nationwide strikes. The subsequent round of wage and price adjustments meant that the economic packages were quickly followed by a renewal in inflation, a renewed loss of external competitiveness, and a return to strongly negative real interest rates.

IV. The 1985 New Economic Policy

The Government that took office in August 1985 announced a package of wide ranging measures, aimed at correcting the internal and external imbalances of the Bolivian economy. The package was centered on a sharp reduction of the deficit of the nonfinancial public sector, and was designed to accomplish adjustment with minimal government controls, so as to reduce the state's role in the economy and open it to market forces. A description of the main measures is contained in the supplement to the staff report for the 1985 Article IV consultation. 2/

The Bolivian program included a number of elements to attack simultaneously the large financial imbalances in the economy, the serious underlying structural problems, and the loss of confidence and control manifested in high and accelerating inflation. The liberaliza-

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1/ November 1982, November 1983, April 1984, November 1984, February 1985, and May 1985.

2/ SM/85/233, Supplement 1, 9/18/85.

tion of prices, interest rates, the official exchange rate, and private sector wages was intended both to alleviate the great distortions introduced by previous controls, and to enhance confidence in economic management and future prospects through the encouragement of market forces and private sector activity. The liberalization of the exchange and trade system was a further part of the move towards a less regulated and more open economy. The imposition of a strict fiscal and monetary policy, with measures to raise revenue and limit spending, and a commitment to end inflationary Central Bank financing of the fiscal deficit, was at the heart of the program; it ensured that demand management policies were supporting the anti-inflation objective. Longer term measures to restructure the economy, in particular to reduce the role of the public sector in the production of goods and services were also part of the program.

Since the initial measures, the Government's exchange rate policy has shifted from one of allowing a floating rate, determined through the auction, to one of promoting exchange rate stability through varying the amounts of foreign exchange sold at the auctions, and using the minimum bid price to guide the market. For most of 1986, exchange rate stability was consistent with an accumulation of reserves, as reflows of private capital were much larger than anticipated. However, since late 1986, there has been pressure on the exchange rate, to which the authorities have responded by selling international reserves on a net basis.

1. Fiscal and monetary policy

The initial Supreme Decree No. 21060 setting out the stabilization package included a number of fiscal measures. The implementation of some of these, particularly the ambitious restructuring of state enterprises and the introduction of a tax reform, were delayed, as it took time to design and elaborate them. A number of important measures were, however, carried out that had an immediate impact on the deficit of the nonfinancial public sector. In addition, the ending of inflation and restoration of appropriate pricing spurred tax collection.

The fiscal measures adopted in mid-1985 included: substantial increases in the prices of goods and services sold by the nonfinancial public sector in the domestic market, particularly the prices for gasoline and other petroleum derivatives; the consolidation of all nonfinancial public sector wages, subsidies and bonuses into a basic annual salary which was frozen until June 1986; the elimination of subsidies on goods sold by nonfinancial public sector entities to their employees; authorization to public sector entities to dismiss employees, which was followed by sizeable employment reductions in COMIBOL and, to a lesser extent, in YPFB; a hiring freeze in the public sector; the freezing of investment outlays until December 1985, and the imposition of tight controls for the scrutiny of all investment projects; the restoration of control over the budgets of the state enterprises, largely through the freezing of their deposits in the Central Bank; and the implementation of an austere budget for the General Government. In March 1986, for the first time in a number of years, a budget was prepared and approved by Congress, thus facilitating expenditure control.

The public finances improved radically in 1985 compared to 1984. The sharp improvement after the stabilization program took effect had a disproportionately large impact on annual figures for the deficit (because nominal values at the time the program was adopted were so much larger than those at the beginning of the year) so that the 1985 ratios to GDP already reflect a considerable adjustment. The overall deficit of the nonfinancial public sector for 1985 is estimated at 12 percent of GDP, reflecting an increase in total nonfinancial public sector revenues from about 5 percent to 13 percent of GDP, and a reduction of about 10 percentage points in expenditures, from over 30 percent of GDP in 1984 to about 25 percent of GDP in 1985.

The revenue effort depended heavily on higher domestic prices of oil (the domestic price of gasoline had been a fraction of world market prices and well below the prices in neighboring countries before the introduction of the measures). This revenue source was relatively easy to control and to increase. Under the program, domestic sales prices of petroleum products were not supposed to fall below a certain U.S. dollar equivalent level per liter.

Another important element of the adjustment program was a reduction in the real wage bill of the public sector. Before September 1985, the Treasury's outlays for wages, including social security and pension payments, were equivalent to about four times tax collections. Overstaffing in the state enterprises meant that, as described above, labor costs were also an important part of their spending. Under the new wage policy, the payment of most bonuses and additional monthly salaries was discontinued in exchange for a more transparent system limiting annual payments to 13 (instead of up to 22) monthly salaries, the seniority bonus (frozen at its July 1985 level), and some other limited payments. Moreover, limits on monthly wage bills were established for each ministry and decentralized agency dependent on the Treasury, and for the major state enterprises.

As a result of the consolidation and wage adjustment, the overall monthly wage bill for these public sector entities declined in real terms by more than 40 percent between July 1985 and December 1985 and by about two-thirds by the end of the freeze period in June 1986. The impact on real wages of this decline was mitigated to some extent by a provision that part or all of the savings resulting from layoffs and resignations be used to raise the wages of remaining workers. 1/

1/ 50 percent of savings for public enterprises, and 100 percent for the General Government.

In addition to the revenue and expenditure measures, the authorities enforced a reduction in the deficit of the nonfinancial sector through a cash squeeze made possible by the reassertion of Government control over the Central Bank and, in turn, of Central Bank control over spending ministries and the public enterprises. The Central Bank did not give credit to public sector entities that had not complied with the budget measures, and all public sector enterprises were permitted to hold only peso-denominated accounts with the Central Bank. The Central Bank did not allow overdrafts on these accounts and transferred any sizeable deposit accumulations by the state enterprises to frozen accounts, which have been released only with the approval of the Ministry of Finance. Expenditures in the General Government were controlled in a similar manner, with an informal rule that no expenditures were to be approved without the corresponding cash available to pay for them.

Besides the tight control over Central Bank financing of the nonfinancial public sector, the authorities liberalized financial policies, so as to give more room to market forces, lower the cost of financial intermediation, and improve the efficiency of the market. 1/ Banking operations in foreign currency were permitted again. Interest rates on deposits and loans in local and foreign currency were freed, except that interest rates on time deposits in foreign currency or with a maintenance of value clause were mandated to be no less than LIBOR; and Central Bank credit to the domestic banking system was restrained.

Interest rates on loans and deposits in local currency remained negative in real terms until September 1985. Thereafter, while nominal lending rates declined almost continuously from 20 percent a month at the end of 1985 to about 4 2/3 percent in early 1987, interest rates have remained strongly positive in real terms. The previously large spreads between lending and deposit rates have been reduced over the past 18 months. Deposit rates also have been positive in real terms, with nominal monthly rates declining from 9.6 percent in the final quarter of 1985 to 2.7 percent in early 1987.

2. Exchange and trade policies

The reform of the exchange rate system was a key element in the new economic program. The fixed exchange rate regime had contributed importantly to distortions in the economy during the previous inflationary period, and to the increasing channeling of transactions outside the formal sector, and loss of government control over economic policy. The fixed rate was replaced by a flexible system, with the value of the Bolivian currency to be determined through periodic foreign exchange auctions. Both private sector and public entities are allowed

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1/ In addition, in early 1987, a change in monetary unit was carried out that exchanged the Bolivian peso for Bolivianos, with one Boliviano equal to 1 million pesos.

unrestricted access to the exchange auction, now held daily, and no taxes are levied on foreign exchange transactions.

The establishment of the auction system allowed the official exchange rate to depreciate and to find its own level after the enormous distortions during the hyperinflation. At the first auction in September 1985, the Bolivian peso depreciated by 93 1/2 percent in terms of the U.S. dollar (more than 1,400 percent in local currency terms). Since then, the exchange rate has been broadly stable, apart from the period November 1985-February 1986.

The Central Bank's exchange rate policy aims to eliminate distortions and preserve competitiveness through limiting its use of net international reserves and avoiding the emergence of any differential between the rate in the parallel market (which receives the proceeds of most invisibles, some private capital reflows, and of illegal exports) and the official exchange rate determined in the auction. Thus, the authorities have maintained open access to the auction market. One aim of exchange rate policy, particularly since early 1986, has been to avoid potentially destabilizing exchange rate movements that may threaten Bolivia's anti-inflation goals. However, at the same time, the authorities wish to maintain a competitive exchange rate that will promote exports and a sustainable external current account deficit.

As described below, the authorities at first appeared to give more weight to the latter goal, recognizing the danger that the large recorded inflows of private capital after the inception of the anti-inflation program could create a bias toward currency appreciation. However, after early 1986, there was more emphasis on exchange rate stability. One tool used by the authorities to indicate their desire for a stable rate is the minimum bid price set by the Central Bank for the dollars that it sells through the auction. This price is published after the auction. It has effectively set a level for the exchange rate, since bids have tended to cluster around this price as market participants have learned to anticipate the lowest acceptable price for dollars (or most appreciated local currency rate). In the case of great exchange market pressure, this price could, of course, become irrelevant if bids for dollars rose significantly and demand was not satisfied by the sales of foreign exchange. In that case, the price for dollars would be driven up. So far, this has not occurred. This is partly because the authorities have increased the supply of foreign exchange to the auction at times when they perceived the emergence of exchange market pressure. Notwithstanding this readiness to increase sales of official foreign exchange, a significant buildup in reserves occurred during the first 11 months of 1986.

When the anti-inflation program was introduced, the authorities also liberalized the external trade regime, allowing virtually all goods to be freely imported and exported, except for those affecting public health or national security, and reducing import tariff rates to a level equivalent to 10 percentage points plus 10 percent of the previously prevailing tariff level. This was followed a year later, in August 1986, by the introduction of a uniform tariff of 20 percent. At that time, virtually all tariff exemptions were withdrawn, with the exception of certain exemptions for the hydrocarbons industry and a one-year extension of the exemption for wheat imports.

3. Wage and price policies

The August 1985 measures established that all prices should be freely determined by market forces, except for the prices of gasoline, urban transport (to be fixed by local government authorities); electricity, railroad transportation, and domestic and international telecommunication services. These prices were raised substantially in the initial package, and since then the public enterprises concerned generally have followed a realistic pricing policy. All public sector company stores selling goods at subsidized prices were abolished.

The wage policy for the public sector has been described above. At the same time, the August measures authorized layoffs of employees in both the private and public sectors, although the costs of such layoffs remain high because of contractual payments to laid-off workers. In the private sector, wage contracts were to be negotiated freely between employers and workers. Only the minimum wage remains binding for the private sector.

V. Preliminary Results

The results during the first 18 months of the adjustment program were impressive in terms of the reduction in inflation, adjustment of the fiscal deficit, and recovery in net international reserves. However, the sharp declines in export prices shortly after the inception of the program contributed to a worsening of the external current account position and the continuation of the recession. Delays in implementing investment programs have also limited the return to growth that the authorities hoped for.

1. Inflation

After the introduction of the 1985 measures, inflation subsided abruptly. A slight decline in prices was registered in October 1985, following a 57 percent rise in prices in September. In 1986, prices rose by 66 percent, but half of this rise took place in January 1986 while prices rose on average by 1 percent a month in the second half of the year. In the twelve months to February 1987, prices rose by 20 percent. Under the financial program supported by the present stand-by and structural adjustment facility arrangements, inflation is projected at less than 10 percent in 1987.

It is possible that the success in reducing inflation was due partly to the fact that, in contrast to other cases, indexation or sustained price freezes before the disinflation program did not safeguard and preserve existing relative prices and wages. Moreover, the speed of price changes just before the anti-inflation program meant that there was very little "inertial" inflation; when the factors pushing inflation higher stopped, the adjustment of pricing behavior to the changed environment was swift.

2. Fiscal and monetary developments

The adherence to a strict fiscal policy, the termination of Central Bank financing of the public sector, and tight control over domestic credit expansion were the critical elements in the success of the anti-inflation effort.

As a result of the tight control of public sector spending, and of the lower than expected foreign financing of investment during 1986, the management of the public finances in 1986 was much tighter than originally envisaged. For the first three quarters of the year, the nonfinancial public sector made net repayments to the Central Bank, and the deficit for the year as a whole is provisionally estimated to have been just over 3 percent of projected GDP, compared with a revised program limit of just under 4 percent of GDP.

The program's success so far in restoring confidence was illustrated by a sharp rise in the demand for money and an inflow of private capital from abroad (although, as discussed below, the official figures may somewhat overstate the size of inflows, and the increase in demand for local currency has been less than that for dollar-denominated instruments). Velocity of money and quasi-money fell by more than 60 percent between September 1985 and June 1986, and the share of currency in circulation dropped to 40 percent of total money and quasi-money at the end of 1986. During the period September 1985 to December 1986, quasi-money grew by more than 1,300 percent in real terms.

The growth in quasi-money was largely in U.S. dollar-denominated deposits, although the actual rate of return on these deposits has been much lower than that on peso-denominated deposits. Deposits in local currency grew by 350 percent over the same period, with their share in total deposits declining from 98 percent, immediately after the legislation of foreign currency deposits, to 40 percent. Interest rates on local currency deposits hovered between 9-12 percent per month in the period October 1985-March 1986 and then fell to just under 3 percent by the end of 1986 and early 1987. Interest rates on U.S. dollar-denominated deposits ranged between 0.9 percent in late 1985 to 1.2-1.3 percent a year later.

The move into foreign currency denominated deposits may have reflected, to some extent, continued uncertainty about the maintenance of anti-inflation policies. The growth in foreign currency deposits in 1985-86 may also have been in part a one-time shift into foreign currency deposits, once these had become legal again. In addition, given the sizeable cash holdings of U.S. dollars at the time when the anti-inflation program was adopted, some of the growth in dollar deposits reflects the re-intermediation of these balances into the financial system, rather than further flight from domestic currency. Thus, the "dollarization" of the banking system since mid-1985 is partly a reflection of an unrecorded switch to dollar assets that took place earlier. At the end of June 1986, U.S. dollar-denominated deposits were equivalent to about $66 million, or 27 percent of money and quasi-money.

Since the August 1985 measures, banks have improved the quality of their portfolios, with a 50 percent reduction in the share of nonperforming loans by June 1986. In addition, banks have strengthened their financial position by reducing overhead costs, with a 30 percent reduction in staff, the closing of some offices, and reductions in other outlays.

Fiscal and monetary policy were relaxed temporarily at the end of 1985 and again a year later. The 13th monthly salary is paid in December in the public sector, at a time when pressures for the release of agricultural credit also rise. The importance of resisting such pressures was clearly illustrated in the period December 1985 to February 1986, when a temporary relaxation of demand management, coupled with increased credit to the agricultural sector, led to pressure on the exchange rate and a burst of inflation.

In December 1986-February 1987, there appears to have been a similar episode, with excessive credit expansion, again reflecting both increased public sector spending (for the 13th wage and separation grants to laid-off workers) and a rise in agricultural credit to the private sector. Currency issue, which rose by 32 percent in the 11 months to November 1986, jumped by 26 percent in December alone. However, in contrast to the experience in 1985-86, when the exchange rate was allowed to depreciate, the authorities intervened actively in the foreign exchange market, aiming to fight inflationary expectations through supporting and maintaining the exchange rate, as described below.

3. External sector developments

a. Balance of payments

The fiscal and exchange rate adjustment was accompanied by a considerable widening in the recorded external current account deficit--from less than 4 percent of GDP during 1982-84 to 8 percent of GDP in 1985-86. Recorded imports grew strongly, following the liberalization of the trade system and much larger than expected reflows of private capital (Table 6). These flows may, however, overstate the response of both imports and private capital to the financial program, to the extent that they represent the entering into the statistics of previously unrecorded transactions. At the same time as capital inflows have

Table 6. Bolivia: Summary of Balance of Payments, 1982-86

(In millions of U.S. dollars)

	1982	1983	1984	1985	Prog. 1986
Current account	-155.8	-155.2	-137.9	-300.1	-323.3
Exports, f.o.b.	827.7	755.1	724.4	623.4	505.7
Imports, c.i.f.	-577.5	-589.1	-491.6	-551.9	-570.1
Interest, net	-370.8	-320.1	-342.8	-324.6	-266.9
Other factor services (net)	-53.8	-108.0	-98.4	-104.0	-73.0
Nonfactor services (net)	-26.9	0.7	-18.0	-23.0	-14.0
Transfers (net)	45.5	106.2	88.5	80.0	95.0
Capital account	-193.8	-223.4	21.6	-3.8	55.0
Nonfinancial public sector 1/	-125.2	-162.4	-184.7	-176.3	-141.0
Disbursements	206.7	92.0	104.9	84.5	144.4
Amortization	-331.9	-254.4	-289.6	-260.8	-285.4
Banking system 2/	-37.2	-141.1	-2.1	91.0	-14.9
Private sector 3/	-113.9	178.4	20.1	47.0	214.1
Overdue receipts for gas exports to Argentina	-145.3	-98.3	188.3	34.5	-3.1
Allocation of SDRs and gold monetization	1.9	0.9	0.9	9.9 4/	2.0
Overall balance	-347.7	-377.7	-115.4	-294.0	-266.3
Unpaid debt services (changes)	274.5	666.2	262.9	327.7	330.3
Arrears and deferred debt	134.3	207.0	262.9	327.7	-1,048.6
Rescheduled debt	140.2	459.2 5/	--	--	1,378.9
Net official reserves (increase -)	73.2	-289.5 5	-147.5	-33.7	-64.0
Memorandum items:					
Current account deficit (As percent of GDP) 6/	3.8	3.9	3.6	8.0	8.6
Interest paid (As percent of GDP)	7.8	7.2	7.5	7.5	3.9
Gross official reserves					
(In millions of U.S. dollars)	182.0	176.7	286.3	273.9	488.1
(In months of imports, c.i.f.)	3.8	3.6	7.0	6.0	10.3
Terms of trade (Percentage change)	-0.2	3.3	-0.8	2.2	-24.9
Official exchange rate (Period average, Bolivian pesos per U.S. dollars)	67	230	2,230	446,215	1,930,300
Stock of external payments arrears, end of period (in millions of U.S. dollars) 7/	252	458	721	1,049	--

Sources: Central Bank of Bolivia; and Fund staff estimates.

1/ Includes short-term debt; excludes balance of payments support loans, involuntary financing of gas exports to Argentina, and impact of debt restructuring.
2/ Includes contributions to international organizations and due but unpaid debt of the banking system.
3/ Includes errors and omissions.
4/ Includes a US$10 million allocation of Andean pesos from the Andean Reserve Fund.
5/ Includes rescheduling of US$369.6 million of short-term debt of the Central Bank as medium-term debt.
6/ U.S. dollar GDP calculated on 1986 base, using real growth and U.S. inflation.
7/ Includes deferred debt service payments in 1982 and 1983, includes estimated interest on interest of US$7 million in 1984 and US$28 million in 1985.

supported imports (and an increase in net international reserves), a collapse in the prices of Bolivia's key exports, tin and natural gas (the price of the latter is governed by contract between Bolivia and Argentina), led to a reduction in export earnings of over 10 percent in 1985 and almost 20 percent in 1986. A further sharp decline is expected in 1987, notwithstanding a recovery in export volumes.

The rationalization of the state mining sector, together with the decline in export prices, means that this source of export earnings will also be much reduced. Despite the favorable impact of exchange rate depreciation on the profitability of the mines, the drop of more than 50 percent in the world price of tin since the inception of the anti-inflation program made many of the existing mines unprofitable. Considerable investment in infrastructure, in particular transport, has been thought necessary to allow for a recovery in export volumes. Over the medium term, the authorities hope to generate significant external concessional resources to finance such investment.

Bolivia has received a favorable rescheduling agreement from the Paris Club, but has not yet signed an agreement with its commercial bank creditors. The country stopped paying interest and servicing its debt to commercial banks in March 1984, and the market value of its bank debt has dropped to extremely low levels. Conclusion of an agreement is being delayed, partly by the reluctance on the part of the banks to accept some of the Bolivian refinancing proposals. In early March 1987, an agreement in principle was reached with the steering committee of the foreign banks consortium on a scheme to allow for a buy-back of Bolivian bank debt at a discount. At present, other creditor banks are considering the request for an enabling amendment.

b. Exchange rate policy

The existence of large, but unknown, export receipts from illegal exports complicates the analysis of exchange rate policy. In addition, data problems have made it difficult to judge the impact on net reserves of a particular policy of gross foreign exchange sales. 1/ However, it appears, as mentioned above, that the authorities' initial policy was to allow the official exchange rate to float, depreciating, if necessary, in response to external pressures such as a shift in the terms of trade. Policy more recently has been aimed at preserving exchange rate stability. The authorities have increased their gross sales of foreign exchange and maintained the minimum bid price unchanged to guide the market.

1/ There are particular difficulties in accounting for the export proceeds from sales of natural gas to Argentina (part of which are held in a restricted use, dollar-denominated account in Argentina); other data problems arise due to the accounting of transactions under the regional payments-clearing mechanism of which Bolivia is a member.

After the initial depreciation of the official rate, the premium in the parallel market virtually disappeared and there was exchange rate stability for a number of weeks, in sharp contrast to the experience immediately preceding the program. However, the collapse of the world market for tin in October 1985 and consequent uncertainty surrounding future tin prices led to renewed pressure on the exchange rate. The authorities allowed the official exchange rate to depreciate in the auction, and raised their minimum bid. During October-November, the official exchange rate depreciated by 10 percent and the parallel rate by 19 percent.

In December 1985, the abrupt loosening of fiscal and monetary policy triggered another round of depreciation and a rapid acceleration of inflation. After this, the authorities tightened domestic policies, and increased sales of foreign exchange in an attempt to stabilize the exchange rate. This was successful and, following a 40 percent depreciation in the official exchange rate that took place from November 1985 to January 1986, the rate appreciated by just over 10 percent in February. It has since remained fairly stable.

The real effective exchange rate was depreciated by 90 percent in foreign currency terms at the beginning of the anti-inflation program and by a further 25 percent from September 1985 to January 1986, as the nominal rate declined. This was followed by a sharp real appreciation in February 1986, as inflation rebounded to 33 percent in January and the nominal exchange rate appreciated. However, the real exchange rate remained 10 percent more depreciated than in September 1985, even following the February appreciation, and changed little during the rest of 1986 (Chart 3).

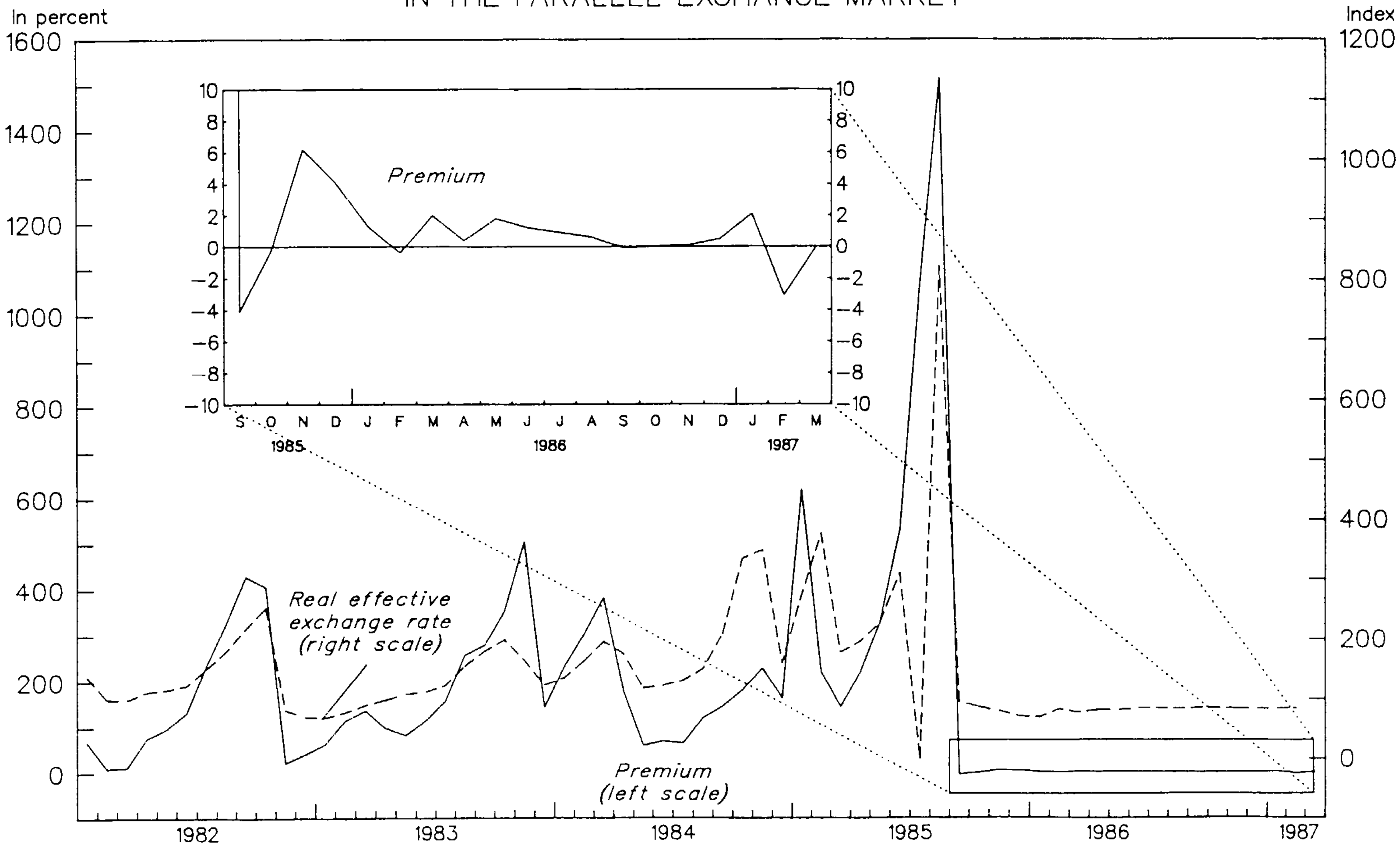
The net impact of the Central Bank's intervention policy during the 12 months after August 1985 was to increase reserves substantially, including during the first quarter of 1986. As Table 4 shows, net international reserves of the Central Bank rose by about $25 million during the first nine months of 1986, despite the sharp decline in export receipts as tin and gas prices fell. A further $70 million increase took place in October-November 1986.

The similar relaxation of domestic policy at the end of 1986 also led swiftly to pressure on the balance of payments. However, in this case, the authorities responded immediately by drawing down international reserves on a net basis and maintaining the exchange rate. Reserves thus dropped by $55 million between end-November and mid-February, while currency issue expanded by 25 percent in December before falling back somewhat in January. The exchange rate has since then remained steady. Market participants have learned to bid at close to the minimum price established of previous auctions, and have so far had their bids satisfied at this price. The authorities were able to carry out this reserves policy without breaching performance criteria under the Fund arrangement because of the substantial reserves margin built up earlier in 1986.

CHART 3

BOLIVIA

REAL EFFECTIVE EXCHANGE RATE AND PREMIUM IN THE PARALLEL EXCHANGE MARKET [1]



Source: Central Bank of Bolivia.

[1] Using monthly average exchange rates.

The Bolivian stabilization program has been remarkably successful in combating inflation. At the same time, the economy has suffered from a number of unfavorable exogenous shocks, in particular the sharp decline in export prices experienced in 1985-86. Moreover, it appears clear that the economy remains vulnerable to the possibility of general financial instability. Since the initial stabilization, lapses in fiscal and monetary restraint have been followed swiftly by a loss of confidence and a rise in demand for foreign exchange.

Such market reactions have, however, helped the authorities in the pursuit of anti-inflationary fiscal and monetary policies, so that the *nature of the anti-inflation program, with market determination of* prices, the exchange rate, interest rates, and private sector wages, has provided the authorities with an effective set of signals by which to guide policy. It will be important for the future success of the policy both that appropriate fiscal, monetary and pricing policies be continued, and that external financing to support the program be available.

Part C. Recent Experience with Inflation Stabilization in Brazil

Contents

I. Introduction

On February 28, 1986 Brazil introduced a price stabilization plan (the cruzado plan) whose primary objective was to put an abrupt end to three-digit inflation. In contrast to Brazil's previous price stabilization efforts during the 1980s, which emphasized demand restraint, the cruzado plan emphasized expectations-adjusting measures, implemented as a price-exchange rate freeze coupled with temporary deindexation of other key prices. At its inception, the program met with overwhelming popular support and succeeded in reducing inflation (as measured by the official price index) in the first months after its introduction. However, a relaxation of monetary and wage policies and failure to eliminate the fiscal deficit created shortages, illegal premia, and the resurgence of high inflation by year-end, thus preventing the cruzado plan from becoming a lasting reform.

The purpose of this note is to provide background on the nature of the inflationary process of Brazil (Section II), to describe previous attempts at controlling inflation (Section III), and to explain the particular features of the cruzado plan (Section IV). It ends with an account of developments after the plan (Section V).

II. The Nature of the Inflationary Process in Brazil

Brazil has had double-digit inflation for the last three decades. Inflation reached 100 percent per annum briefly in 1964 but was reduced to about 30 percent until the end of the seventies. Following the second round of international oil price increases, the rate of price increase accelerated, reaching 100 percent by 1980. Inflation received further impulse during the early 1980s and by the end of 1983 prices were growing at more than 200 percent per annum (Table 1). 1/ Inflation accelerated sharply toward the end of 1985 and reached 460 percent on an annual basis in the two months prior to the adoption of the cruzado plan.

1/ Reference in this paper to inflation is based on several indices. Up to October 1985, inflation is measured by the general price index (a composite of the industrial wholesale price index, the cost-of-living index in Rio de Janeiro, and a cost-of-construction index) which formed the basis for the indexation of most key prices in the economy until then. From November 1985 to October 1986, inflation is measured by the national consumer price index (high income), which replaced the general price index as a basis for the indexation of most key prices. From November 1986 onward, inflation is measured by the national consumer price index (low income) which was chosen at that time for wage indexation. These different indices are presented in Table 1.

Table 1. Brazil: Price Statistics

	1979	1980	1981	1982	1983	1984	1985	1986
	(Percentage change)							
Average								
General price index 1/	53.9	100.2	109.9	95.4	154.5	220.6	225.5	143.6
Consumer price index (high income) 2/	52.7	82.8	105.6	97.9	135.4	191.6	229.9	140.6
End of period								
General price index 1/	77.2	110.2	95.2	99.7	211.0	223.8	235.1	65.0
Consumer price index (high income) 2/	76.0	86.3	100.6	101.8	163.8	219.0	236.2	76.8

(Monthly inflation rate)

	1985			1986		
	General Price Index	Consumer Price Index (High Income) 2/	Consumer Price Index (Low Income) 3/	General Price Index	Consumer Price Index (High Income) 2/	Consumer Price Index (Low Income) 3/
January	12.6	11.8	11.8	17.8	16.2	15.0
February	10.2	10.9	10.9	22.4	14.4	12.5
March	12.7	10.8	10.0	-0.9	-0.1	3.2
April	7.2	7.8	8.6	-0.6	0.8	1.4
May	7.8	7.2	7.2	0.3	1.4	0.1
June	7.8	8.5	8.3	0.5	1.3	1.0
July	8.9	10.7	10.1	0.6 4/	1.7 4/	0.8
August	14.0	12.0	11.6	1.3 4/	3.5 4/	1.1
September	9.1	10.8	10.1	1.1	1.7	1.2
October	9.0	10.3	10.3	1.4	1.9	1.4
November	15.0	12.2	14.2	2.5	5.5	3.3
December	13.2	14.8	15.8	7.6	11.7	7.3
	1987					
January	12.0	13.2	16.8			
February	14.1	12.6	13.9			
March	15.0	16.4	14.4			
April	20.1	19.1	21.0			

Sources: Information provided by the Brazilian authorities; and Fund staff estimates.

1/ The general price index formed the basis for the indexation of several key prices (e.g., the exchange rate, the Treasury bond rate, and most rates in financial transactions) until November 1985. It is a composite of the industrial wholesale price index, the cost-of-living index in Rio de Janeiro, and a cost-of-construction index.

2/ Corresponds to the national consumer price index (centered at the middle of the month) based on consumption patterns of individuals earning up to thirty times the minimum wage, which is only available from 1983 onward. For previous years, the index corresponds to the consumer price index of Rio de Janeiro.

3/ Corresponds to the national consumer price index based on consumption patterns of individuals earning up to five times the minimum wage.

4/ Includes the effect of the compulsory levies introduced in July 1986.

As in the case of other countries, there is no single explanation for inflation in Brazil. Several studies on Brazilian inflation have emphasized the link between widespread indexation in the economy and the inertial tendency of the system to perpetuate inflation, and have pointed to the constraints that the proliferation of indexation arrangements can impose on the effective response of inflation to demand-management policies in the face of adverse shocks. 1/ While this factor appears to have played an important role, fiscal imbalances and lack of adjustment to adverse real supply shocks were also major contributors to the inflationary process. Ultimately, inflation was maintained at high levels through monetary policy which accommodated inflationary pressures as they developed.

1. Fiscal imbalances

Widening deficits in the operations of the nonfinancial public sector have been a major contributor to inflation in Brazil. Concurrent with the acceleration in inflation during the early 1980s, the public sector borrowing requirement increased from about 8 percent of GDP in 1979 to nearly 17 percent of GDP in 1982, partly reflecting a doubling of the operational deficit (Table 2). 2/ In the following years, inflationary pressures fed back into public sector deficits by increasing interest payments on public debt (due to indexation of Treasury bonds and most other financial contracts) and by offsetting the effects of increases in taxes during the period through the erosion of real tax revenues due to collection lags. In spite of successful efforts to reduce the operational deficit during 1983-84, the overall public sector deficit increased steadily to more than 22 percent of GDP in 1984. Relaxation of demand management policies and an acceleration of inflation during 1985 resulted in a further increase in the overall public sector deficit (to 27 percent of GDP) in that year.

a. Budget control

A major factor behind the increase in fiscal imbalances since the early 1980s has been a lack of effective budgetary control. This resulted from the proliferation of public sector agencies and enterprises during the previous decade whose budgets were not subject to

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1/ Simonsen (1983); Macedo (1983); Arida and Lara-Resende (1985); Perera and Nakeno (1986); and Lopez (1986).

2/ In the Brazilian context, the public sector borrowing requirement can be broken down into two components: the part of interest payments due to the indexation of public debt (monetary correction), and the net result of all other budgetary items (operational deficit), which includes real interest payments beyond monetary correction. In essence, the first component captures the difference in valuation due to indexation of the stock of outstanding public debt during the period, since interest payments due to monetary correction are automatically capitalized.

Table 2. Brazil: Selected Economic Indicators, 1978-1986

	1978	1979	1980	1981	1982	1983	1984	1985	Prel. 1986
				(In percent of GDP)					
Current account balance 1/	-6.8	-7.9	-8.0	-6.9	-8.9	-3.7	--	-0.1	-1.9
Public sector borrowing requirement 2/	6.1	8.1	7.1	11.5	16.7	19.9	22.2	27.1	9.9
By source of financing									
Domestic	(1.8)	(5.7)	(6.7)	(10.3)	(13.9)	(19.3)	(21.1)	(26.6)	(...)
Foreign	(4.3)	(2.4)	(0.4)	(1.2)	(2.8)	(0.5)	(1.0)	(0.5)	(...)
By selected expenditures									
Operational	(...)	(3.0)	(3.6)	(4.8)	(6.5)	(3.0)	(1.6)	(3.5)	(3.1)
Of which:									
Public enterprises	[...]	[3.3]	[2.7]	[2.8]	[4.6]	[2.8]	[1.5]	[2.8]	[...]
Monetary correction	(...)	(5.1)	(3.5)	(6.7)	(10.2)	(16.9)	(20.6)	(23.6)	(6.8)
Of which:									
Public enterprises	[...]	[1.2]	[1.2]	[2.6]	[4.0]	[8.1]	[8.5]	[9.1]	[...]
Base money (period average) 3/	5.4	5.5	4.3	3.4	3.0	2.3	2.1	2.1	3.0
Money (M1) (period average) 3/	9.7	9.1	7.5	7.0	6.6	5.1	4.1	4.3	6.8
				(Annual percentage changes, unless otherwise indicated)					
Money and credit 3/									
Domestic credit 3/	59.3	69.3	67.8	121.6	120.5	198.5	213.3	251.7	107.0
Public sector	3.1	73.4	87.0	122.3	192.0	228.8	182.7	293.2	88.5
Private sector	46.0	56.6	65.8	111.6	102.1	149.2	207.7	245.9	113.9
Money and quasi money (M2)	53.7	72.5	72.0	118.0	116.4	171.5	251.6	268.8	134.3
Money (M1)	41.1	69.7	71.4	81.2	84.0	93.1	200.4	304.1	323.3
Velocity (M1) 4/	10.3	11.0	13.4	14.4	15.1	19.5	24.3	23.3	14.6
Real GDP	4.8	7.2	9.1	-3.4	0.9	-2.5	5.7	8.3	8.2
Real minimum wage 5/	2.2	-0.4	2.5	3.3	-3.7	-8.9	-5.9	2.3	...
Real industrial wage 6/	8.3	2.2	2.8	3.2	6.9	-9.1	-1.4	6.3	9.5
Real effective exchange rate	-4.2	-8.3	-11.1	21.6	5.7	-18.8	--	-4.0	-5.7 7/
Gross reserves (US$ bn.) 8/	11.9	9.7	6.9	7.5	2.6	3.2	10.2	10.0	5.3

Sources: Central Bank of Brazil; and staff estimates.

1/ GDP converted into U.S. dollars at the 1985 purchasing power parity exchange rate.
2/ Excludes interest payments on external debt of the Central Bank guaranteed by the Government. The PSBR to GDP ratios have not been readjusted to take into account a new national accounts series published in 1987.
3/ Minor definitional changes to credit and money concepts apply from 1981 onward.
4/ GDP divided by the average stock of M1.
5/ Break in series starting 1983.
6/ Average real wage in the Sao Paulo industrial sector.
7/ The interpretation of this index is distorted in 1986 due to the proliferation of illegal premia not captured in the official price index.
8/ Gross international reserves of the monetary authorities, which included the Central Bank and the Banco do Brasil until 1985, and the Central Bank from 1986 onwards.

government approval or monitoring, as well as from the rigidities introduced by widespread earmarking of government revenues.

The Brazilian public sector is present in a wide range of economic activities through either whole or partial ownership in over 800 public enterprises. Throughout the 1970s public sector enterprises and other government agencies embarked on ambitious investment programs. By 1979 the public sector deficit reached 8.1 percent of GDP, more than half of which was generated by public enterprises (see Table 2). In October 1979 the Government took steps to regulate the activities of public enterprises through the establishment of a Secretariat for the Control of Public Enterprises (SEST) under the direction of the Ministry of Planning. In practice, however, the control of the federal authorities over the performance of public enterprises has been effectively limited to what can be achieved through control over their sources of financing, which has been frequently difficult to enforce. As a result, the operations of public enterprises continued to register a deficit throughout the 1980s.

Revenue earmarking also created an important obstacle to the implementation of fiscal restraint. Earmarked taxes amounted to almost half of total federal tax revenues in 1978. This earmarking consisted of both tax sharing with state and municipal entities, and the collection of funds for a specific use. 1/ In 1979 a plan was approved to phase out earmarked taxes that resulted in a reduction in the share of earmarked taxes in Federal Treasury revenue from 48 percent in 1978 to about 30 percent in 1982. However, further progress proved difficult due to the Government's priority of maintaining earmarking on revenue-sharing arrangements with lower levels of government.

b. Other factors

Inflation has contributed to public sector deficits due to its asymetrical impact on public sector revenue and expenditure. The real value of tax revenue, particularly of income tax revenue, diminished rapidly as a consequence of inflation due to collection lags, while high inflation increased expenditure, particularly interest expenditure on public debt.

Several methods were used by the Treasury to mitigate the erosion in real tax revenue, such as deductions at the source and the imposition of advance payments. This, together with increases in taxes helped prevent Federal Treasury revenues from declining as a proportion of GDP during 1980-85. However, expenditure on monetary correction which in 1980 amounted to 3.5 percent of GDP increased to 24 percent of GDP by

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1/ Taxes on petroleum products, public utilities, and electric power, for example, were almost completely designated for use by federal, state, and municipal authorities in the activities from which they originated.

1985, largely accounting for a public sector deficit of 27 percent of GDP in that year (see Table 2). Because of the size of the domestic public debt (which in 1985 amounted to 22 percent of GDP 1/), inflation introduced substantial rigidity to public expenditure.

2. Indexation arrangements

Widespread indexation was introduced in Brazil during 1964-65 as part of a stabilization package to redress domestic and external imbalances. Indexation arrangements were extended to all key prices such as wages; interest rates charged by financial institutions on most types of credit; the rate paid by the Government on Treasury bonds; the rates paid by financial institutions on most types of deposits and other financial instruments; and most housing rents. Since then, indexation arrangements have remained a feature of the Brazilian economy.

The Brazilian system of indexation evolved continously since its inception and its history is embodied in a variety of statutes and decrees. This section outlines the evolution of the principal indexation elements and institutional arrangements until the introduction of the cruzado plan in February 1986.

a. Labor markets

Statutory minimum wage rates and government salaries had been long influenced in Brazil by cost-of-living indices, and nominal wages were frequently adjusted because of rapid inflation. However, automatic escalator clauses embodying formal wage indexation were not introduced in labor contracts until 1964.

The 1964 wage indexation law was intended as an incomes policy tool to help reduce real wages by imposing mandatory wage adjustments which fell well short of full indexation. This law had, for the first time, a binding effect on all collective wage negotiations in the public sector and the nonagricultural private sector. It established that nominal wages should be adjusted once a year taking into account the expected inflation rate, so that their average purchasing power would be equal to the average real wage of the previous 24 months plus a productivity gain. 2/ Since the expected rate of inflation and the productivity gain were decreed by the Government, this law reduced real wages whenever productivity gains or future inflation rates were underestimated by the authorities. This in effect took place during 1965-67 and the average real wage in the manufacturing industry declined by about 25 percent during that period.

1/ Annual average public debt to GDP ratio.

2/ Firms could increase wages over and above the wage formula, but the excess could not be passed onto prices. Nor could a wage settlement in excess of the adjustment permitted under the wage formula be enforced in the Labor Courts.

Subsequent revisions to the 1964 wage law allowed for partial compensation for past inflation underestimation (the 1968 law) followed by full compensation for such underestimation (the 1974 law). The shift to a rule that allowed for full adjustment for past inflation did not totally deprive the mechanism of its effectiveness as an incomes policy instrument since the Government retained the decision on the productivity coefficient in wage determination. However, this was modified in 1979.

Three major changes were introduced by the wage indexation law of November 1979. The first change concerned the determination of the productivity coefficient. This coefficient, which was formerly determined by the Government and often adjusted for supply shocks, became a freely bargained item between employers and employees. As a result, the indexation rule set a floor and not a ceiling to collective wage negotiations and could therefore no longer be used as an incomes policy instrument. Second, the nominal wage adjustment interval was reduced from 12 to 6 months. The more rapid indexation of wages attempted to increase the worker's average wage in real terms through more frequent readjustments of nominal wages. However, accommodating monetary policy and the passing on of this readjustment to prices nullified its effect. Average real wages ultimately were reduced to their previous level when the annual inflation rate doubled in 1980. Third, the degree of indexation was made a function of the wage level, and allowed a 10 percent overindexation in the lower wage bracket which was not offset by the fractional indexation of higher wages, given the existing wage pyramid. As a result, average wage indexation was higher than the inflation rate it was supposed to compensate for.

The influence of the 1979 wage policy on cost and aggregate demand was one of the factors causing Brazil's inflation to rise to three-digit levels in 1980. 1/ But it was neither the initial cause of this inflationary spurt nor the only one that added to it. A weakening of demand policies in 1978-79 contributed to the intensification of inflationary pressures, which was aggravated by successive rounds of international fuel price increases, two consecutive years of poor agricultural performance, and a major devaluation in December 1979 which fed into the system of widespread indexation.

During the early 1980s the 1979 wage legislation was modified on several occasions in an attempt to limit the degree of indexation. The most successful efforts in this regard were undertaken during 1983 (Table 3). However, the policy of gradually reducing the degree of indexation met with substantial problems in implementation, partly

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1/ In addition to the factors just mentioned, the transition procedure from the system of annual readjustments to that of semiannual readjustment in wages increased fourfold the percentage of total wages that received a readjustment in the month of November 1979 and implied a substantial increase in the wage bill in that month.

Table 3. Brazil: Wage Indexing Factors in Recent Wage Laws

(In percent of rate of inflation) 1/

Salary Range	Law 6708 Nov. 1979-Dec. 1980		Law 6886 Dec. 1980-Jan. 1983		Decree Law 2012 Jan.-May 1983		Decree Law 2024 May-July 1983		Decree Law 2045 July-Oct. 1983		Decree Law 2065 Nov. 1983-Oct. 1984 2/		Law 7238 Oct. 1984-Feb. 1986	
(In minimum wages)	Marginal	Average 3/	Marginal	Average 3/	Marginal	Average 3/	Marginal	Average 3/	Marginal	Average 3/	Marginal	Average 3/	Marginal	Average 3/
Up to 3	110	110.0	110	110.0	100	100.0	100	100.0	80	80.0	100	100.0	100	100.0
3-7	100	106.7	100	106.7	95	98.2	100	100.0	80	80.0	80	93.6	80 4/	93.6 4/
7-10	100	103.6	100	103.6	80	94.3	80	96.7	80	80.0	60	84.0	80 4/	87.1 4/
10-15	80	99.0	80	99.0	80	89.8	80	91.4	80	80.0	60	76.5	80 4/	84.9 4/
15-20	80	93.3	50	89.0	50	82.9	50	84.0	80	80.0	50	70.4	80 4/	83.5 4/
Beyond 20	80	87.6	Negotiable	76.0 5/	Negotiable	66.1 5/	Negotiable	66.7 5/	80	80.0	50	61.5	80 4/	81.6 4/
Average 3/	...	103.1	...	100.8	...	90.8	...	93.6	80	80.0	...	86.8	...	91.7

Sources: Ministry of Labor; Ministry of Social Security; and Fund staff estimates.

1/ As measured by the consumer price index (low income).

2/ From August 1985 onward the degree of indexation was to be reduced every year and the share of total remuneration subject to free bargaining increased until August 1988 when indexation was to be replaced by a system of free bargaining. This was not implemented.

3/ Weighted by the proportion of the wage bill corresponding to different salary ranges.

4/ Minimum indexation Law 7238 allows full adjustment to past increases in the consumer price index (low income) if such is the outcome of a free bargaining process.

5/ Assuming that the adjustment factor for the portion of salaries in excess of 20 times the minimum wage is negotiated at 50 percent.

because inflation, far from subsiding, accelerated further during 1983-84, and the progress achieved was partially reversed in late 1984. The pervasiveness of indexation arrangements worked to maintain inflation at the higher levels registered in those years, since price increases were validated by accommodating monetary policy.

The Brazilian experience with wage indexation illustrates the different effects on inflation of ex ante and ex post wage indexation rules. While the former was successfully implemented to reduce inflation in the 1964-65 stabilization episode, the latter seems to have been an important contributor to the acceleration of inflation in the 1980s. In particular, the downward real wage rigidity imbedded in ex post wage indexation imposed a heavy burden on the effectiveness of adjustment policies in response to adverse supply shocks during the 1980s. If a cut in real wages was called for to limit the negative effects on output and inflation of the shock, full ex post indexation meant that this could only be secured through faster inflation (i.e., cutting the average real wage over the wage adjustment cycle). Hence, in the end inflation was propelled to higher levels and perpetuated thereafter, partly due to the rigidities of indexation arrangements.

b. Capital markets

Until 1964 usury laws in Brazil established a nominal interest rate ceiling of 12 percent a year. Since annual inflation rates soared from 11 percent in 1952 to 92 percent in 1964, this law severely handicapped domestic savings and the development of capital markets. Money and long-term loans were only supplied in very limited amounts by a few government agencies and borrowers were usually selected by political criteria.

Indexed Treasury bonds (ORTNs) were created in July 1964 with the primary objective of promoting savings and the development of capital markets. Soon they became the basis for financial indexation in the economy, including the indexation of private bonds, savings accounts, rents, mortgages, and fiscal debts. Starting in 1965, ORTNs have been adjusted every month for the effect of inflation on the basis of an indexation rule set by the authorities which, with the exception of brief episodes in 1973 and 1980-81, has by and large followed actual inflation rates with a lag (postfixed monetary correction). The indexing mechanism on Treasury bonds is implemented by publishing every month an index number giving the corrected nominal value of the bond, which is obtained by capitalizing interest payments on monetary correction. At maturity the bond is redeemed in cash at its corrected value. Its sale and purchase before maturity always takes into account the corrected value.

Domestic savings increased steadily from about 16 percent of GDP in 1963-64 to 25 percent of GDP in the mid-1970s, partly reflecting the introduction of financial indexation and the larger availability of more attractive savings instruments. Since the introduction of ORTNs, apart from certain assets and liabilities of the central government, the only assets that offered no protection against the erosion of purchasing power were currency and demand deposits. As inflation accelerated in the 1980s, their combined share in private sector holdings of financial assets dropped from 29 percent in 1980 to about 10 percent in 1984-85.

c. Exchange rate

Beginning August 1968 the exchange rate in Brazil became indirectly indexed through a system of minidevaluations. At the beginning, the dollar/cruzeiro rate was changed by small percentages at short and irregular intervals (10-50 days) according to the inflation rate differential between Brazil and the United States. Adjustments were imposed on this basic rate to take into account U.S. dollar fluctuations relative to other major currencies, changes in the terms of trade, and the balance of payments situation.

This practice was interrupted in December 1979. Following a 30 percent devaluation of the cruzeiro, the increase in the dollar/cruzeiro rate was predetermined by the authorities as a function of expected inflation. This resulted in a rapid appreciation of the cruzeiro during 1980 as officially expected inflation fell well short of actual inflation. Starting November 1980 the policy of prefixed exchange rate was abandoned and the cruzeiro was devalued vis-à-vis the U.S. dollar at frequent intervals in line with domestic price developments. 1/ This practice was by and large maintained until the introduction of the cruzado plan, with the exception of a large step devaluation in February 1983.

The system of minidevaluations contributed to a rapid growth of Brazilian exports during the 1970s, and has been fundamental to the maintenance of external competitiveness in recent years. However, efforts to shift relative prices in favor of tradable goods through flexible exchange rate policy has by and large resulted in higher prices and has contributed to inflationary pressures due to downward price rigidity imposed by widespread domestic indexation.

3. Constraints on monetary policy

Monetary aggregates grew rapidly in Brazil during the 1980s. Money and quasi money (M2), which in 1979-80 already grew by more than 70 percent per year compared with about 50 percent in 1978, accelerated to about 115 percent per annum in 1981-82 (see Table 2). In subsequent years the growth of monetary aggregates continued to accelerate, and by 1985 M2 was growing at about 270 percent per annum. Several factors have affected the authorities' capacity to implement monetary restraint,

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1/ Due to the strengthening of the dollar, the cruzeiro continued to appreciate in real terms during most of 1981 (Table 2 and Chart 3).

including institutional arrangements, a fragile financial system, and a declining demand for money.

a. Institutional arrangements

In Brazil, the responsibility of the monetary authorities (Central Bank and Banco do Brasil) extended far beyond conventional central banking. The Central Bank assumed important fiscal functions, including the execution of certain expenditures on behalf of the Government. These expenditures included direct subsidies (wheat, sugar, alcohol, petroleum, and soybeans); agricultural minimum price operations; advances to certain special funds and programs; and payments on behalf of the social security system. The transfers provided by the Treasury to finance these expenditures fell frequently short of the amount required, and the Central Bank regularly covered the emerging shortfalls.

The monetary authorities have also executed development functions through the provision of subsidized credit. The entity most involved in these operations was the Banco do Brasil, a government-controlled commercial bank which until February 1986 could create high-powered money through its access to an open-ended rediscount facility with the Central Bank at zero nominal interest rate (conta de movimento). Although the National Monetary Council, chaired by the Minister of Finance, established an annual monetary budget which set limits to the expansion of the money base and assets of the Banco do Brazil, in practice these limits were frequently exceeded.

b. Segmentation of the credit market

In addition to agriculture, the monetary authorities have sought to channel resources into two other priority areas, viz., exports of manufactured goods and the energy sector. Selective credit policies, minimum portfolio requirements, and subsidized loan rates have all contributed to the segmentation of the credit market. This segmentation has resulted in an interest rate structure with a large variance and has been responsible in part for the very high real lending rates that have prevailed in other sectors of the economy. Since certain large financial institutions, especially those related to the housing sector, were particularly vulnerable to increases in real interest rates due to the maturity mismatch of their assets and liabilities and restrictions on their lending rates, the authorities have in the past been reluctant to contain growth of the monetary base through more active interest rate policy.

c. Shrinking inflation tax revenue

The high rates of inflation that Brazil experienced since the late 1970s resulted in a decline in the demand for narrow money from 5.5 percent of GDP in 1978-79 to 2.1 percent in 1985, as the liquidity requirements of the economy were met by other financial assets indexed to inflation which became increasingly liquid (e.g., time and savings deposits and government securities) (Chart 1). The attempt at maintaining the real value of the inflation-tax revenue through higher rates of nominal money growth resulted in further inflation, with correspondent erosion of the base of inflation tax. As a result, the monetary authorities' control of real resources decreased.

The shrinkage of base money is of particular relevance when seen against the size of public sector deficits or balance of payments aggregates. In 1985, for example, the overall borrowing requirement of the public sector was about thirteen times the size of base money; in 1984 the overall surplus of the balance of payments was about one and one half times the size of base money.

III. Stabilization Efforts Prior to the Cruzado Plan

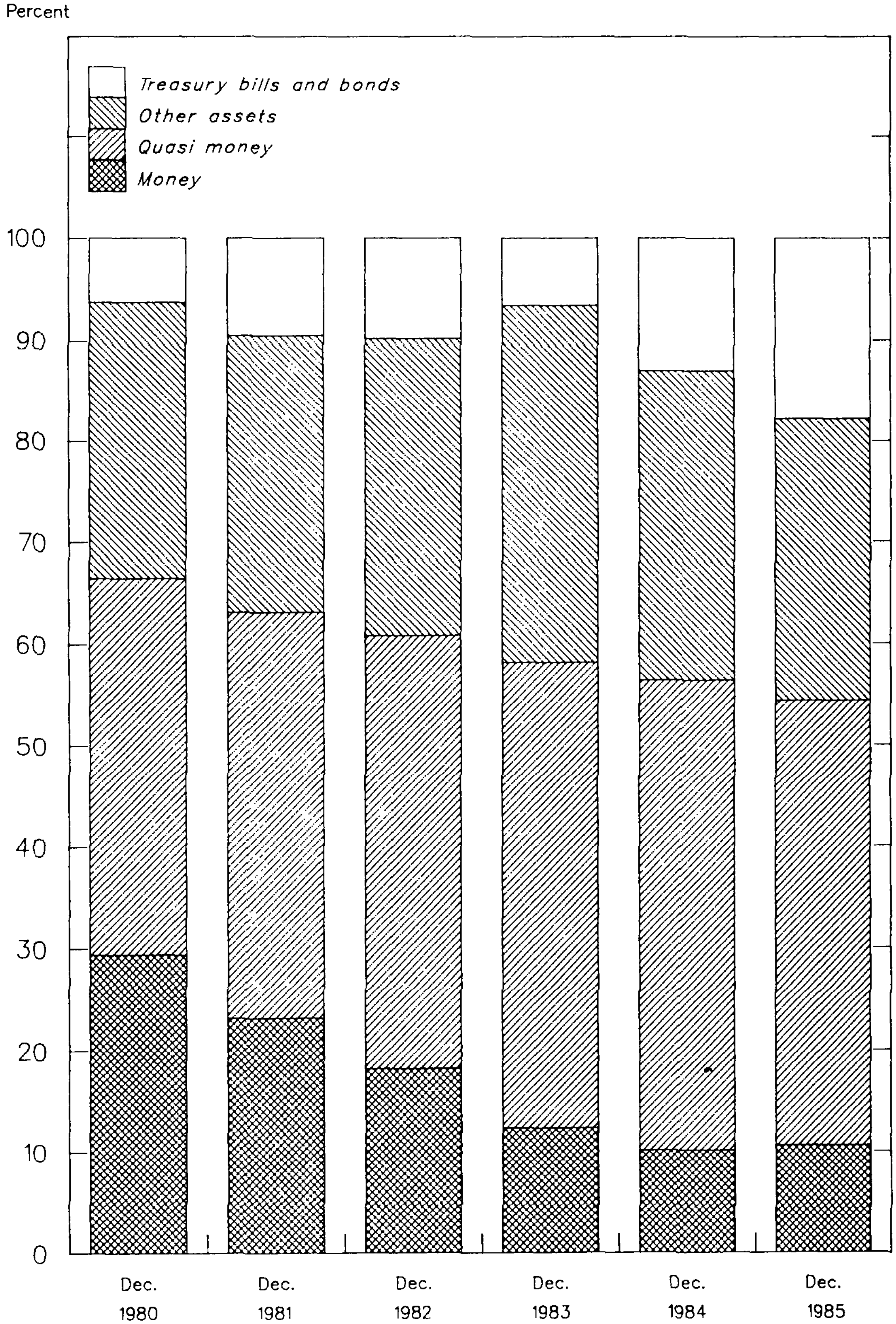
During the period between the acceleration of inflation in 1979 and the implementation of the cruzado plan, the authorities attempted to deal with inflation as part of the broader and more pressing concern of achieving a viable external position. The second round of international oil price increases and the ensuing deterioration in the international environment created external imbalances of a magnitude unprecedented in Brazil and top priority was assigned to the objective of providing the conditions for improved balance of payments performance. Following a failed attempt during 1979-80, this objective was fully achieved during a second stabilization episode in 1983-84. However, success on the external front was not matched by progress in reducing inflation. In the event inflation far from subsiding, accelerated further, partly as a consequence of widespread indexation.

1. 1979-81

The 1979 increase in the international price of oil, which came at a time when domestic demand management policies were easing, aggravated Brazil's external and internal imbalances. The authorities responded by adopting in late 1979 and early 1980 a package of measures that included a major devaluation of the cruzeiro, fiscal and monetary restraint, and a liberalization of the foreign trade system. Key objectives of the plan were to achieve a turnaround in the external accounts and to reduce inflation. In order to dampen inflationary expectations, the authorities introduced a policy of prefixing the path that would be followed during 1980 by the exchange rate and the rate at which domestic financial assets were to be adjusted for inflation (the rate of monetary correction). These prefixed rates were consistent with a projected inflation rate of about 50 percent.

In the event, actual inflation exceeded the projected one by a wide margin, and the policy of prefixed exchange rates led to a rapid erosion during the year of the external competitiveness gained by the December 1979 devaluation, and to negative real rates of interest; the latter

CHART 1
BRAZIL
PORTFOLIO COMPOSITION OF PRIVATE SECTOR
HOLDINGS OF FINANCIAL ASSETS



Sources: Central Bank of Brazil.

resulted in financial disintermediation, buoyant domestic demand, and a weakening of the savings effort. These developments, together with an increase in international interest rates, led to a rise in the external current account deficit to 8 percent of GDP in 1980, which was partly financed by a US$3 billion loss in gross international reserves (see Table 3).

On the domestic front, efforts at fiscal restraint did not succeed in reducing the operational deficit, which increased slightly to 3 1/2 percent of GDP during 1980; the overall deficit was somewhat reduced to 7 percent of GDP due to lower interest payments as a result of pre-fixed monetary correction. Concurrent to this, there was a marked shift in the financing of the deficit following an abrupt reduction in the net inflow of foreign resources to the public sector. Foreign financing of the deficit dropped from 4 1/2 percent of GDP in 1978 to less than 1/2 percentage point of GDP in 1980, while domestic financing increased by 5 percentage points of GDP during that period. Wage policy also contributed to inflationary pressures. Free bargaining of productivity increases during 1980, which allowed wages to override the prefixed rate of monetary correction, together with other elements of the new 1979 wage law, resulted in an increase in real wages. As a result of these factors, inflation accelerated from about 55 percent in 1979 to 100 percent in 1980.

As the external financing constraint became more pressing, the authorities' overriding priority became the attainment of a viable external position. To achieve this objective, the policy of prefixing the rates of monetary correction and of the depreciation of the currency were abandoned in late 1980 to bring these rates more in line with domestic price increases. At the same time, the authorities reduced interest rate subsidies, reintroduced export incentives, and attempted to pursue a generally tighter monetary and fiscal policy.

The external sector reacted favorably to this reorientation of policies. In 1981 the trade balance registered its first surplus since 1970 and the current account deficit was reduced to about 7 percent of GDP. However, a further increase in real wages together with an increase in the overall financing requirement of the public sector from 7 percent of GDP in 1980 to 11 1/2 percent in 1981 (see Table 2), largely reflecting increased interest payments resulting from a rapid increase in domestic debt during 1980-81, prevented substantial progress toward reducing the rate of inflation.

2. 1983-84

A disappointing economic performance during 1982 reflected in widening fiscal and external current account deficits together with a sharp drop in net foreign capital inflows following the emergence of widespread debt servicing difficulties, resulted in a dramatic drop in reserves which underscored the need for a major revision in economic strategy (see Table 2). In particular, it became clear that Brazil would no longer be able to rely on foreign resources to finance its development effort to the extent it had in the past. Domestically, there was a need to eliminate a large number of distortions and to reduce the size of the public sector which was consuming a major portion of available savings. The measures taken since 1979 in this respect, had not resulted by 1982 in any major improvement in resource mobilization and use. The claims of the public sector on resources rose to 17 percent of GDP by 1982 and inflation showed remarkable resilience.

During 1983-84 Brazil undertook a second stabilization attempt which was supported by an extended arrangement with the Fund. The basic objective of the program was to reduce the external current account deficit from US$15 billion in 1982 to US$7 billion in 1983, to be followed by smaller deficits in 1984-85. An improvement in public finances was to be instrumental in scaling down foreign borrowing and reducing the rate of inflation to 90 percent by end-1983, and to some 40 and 20 percent during 1984 and 1985, respectively. The program also contemplated cutbacks in credit subsidies to agriculture, a substantial liberalization of domestic pricing policies (particularly with respect to prices of fuel products), a tightening of income policies, and the liberalization of restrictions on trade and payments.

Brazil's performance during the first two years of the extended arrangement resulted in a remarkable improvement in the country's external position (Chart 2), which surpassed by wide margins the targets established for the entire 1983-85 period. The external current account shifted from a deficit of 9 percent of GDP in 1982 to equilibrium in 1984 and international reserves rose from US$2.6 billion in 1982 to over US$10 billion by end-1984. Instrumental in the achievement of these results were a major devaluation of the cruzeiro in early 1983, the continued pursuit of an active exchange rate policy (Chart 3), and favorable conditions in external markets.

External adjustment came about mainly through a reduction in domestic expenditure and a shift in relative prices toward tradables. The brunt of adjustment fell on investment expenditure which was reduced by 4 percentage points of GDP from 1982 to 1984 (Table 4). Merchandise exports increased by 2 percentage points of GDP while merchandise imports decreased by 3 1/2 percentage points of GDP from 1982 to 1984. Economic activity fell in 1983 but rebounded strongly in 1984; real GDP in that year was 3 percent higher than in 1982.

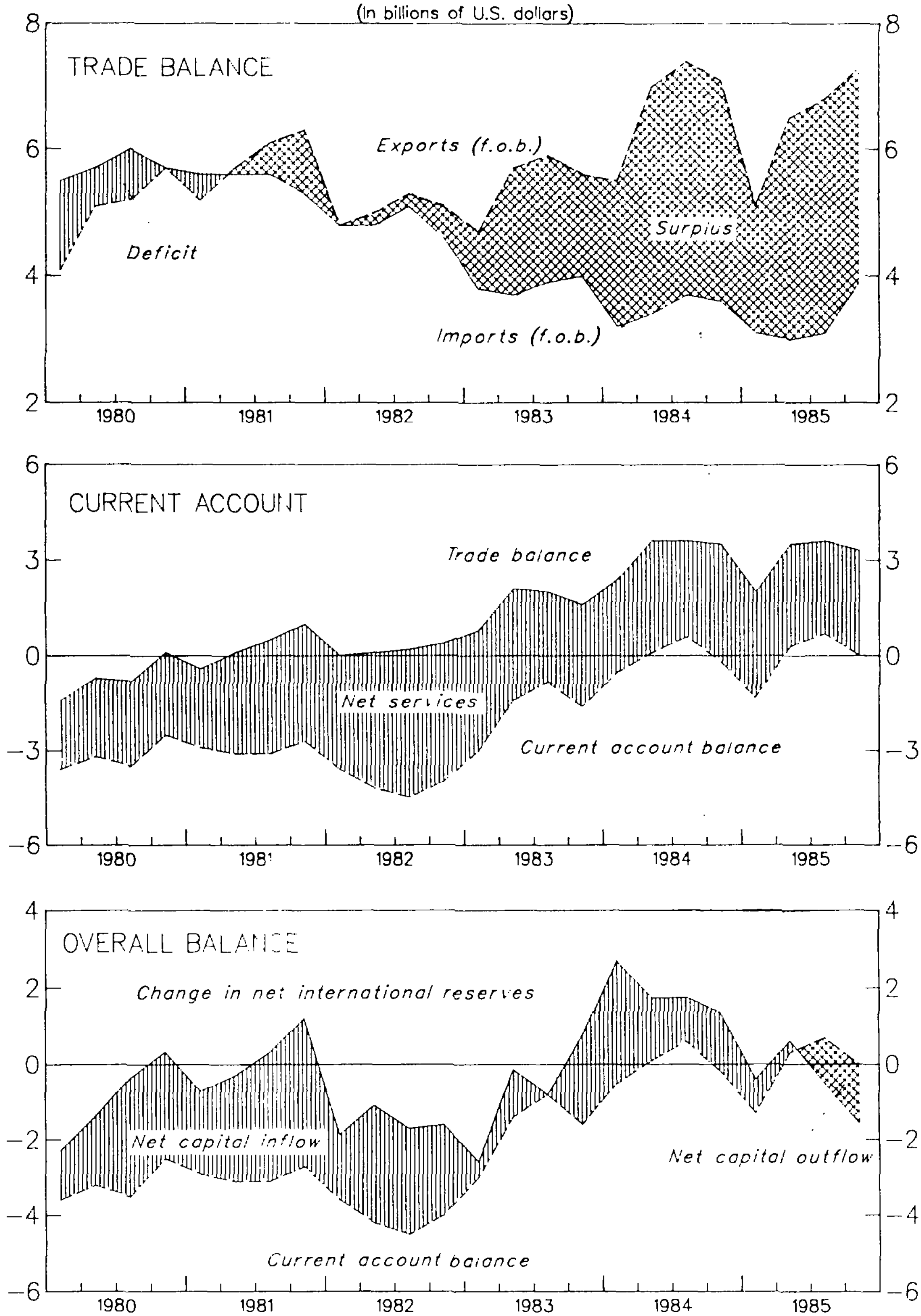
Progress on the domestic front during 1983-84 was not commensurate with that achieved in the external accounts. The stabilization program focused principally on the reduction in the public sector deficit and was successful in reducing the operational fiscal deficit from 6.5 percent of GDP in 1982 to 1.6 percent of GDP in 1984. However, the overall performance of the public sector fell short of expectations. The overall public sector deficit, i.e., including expenditures for indexation of domestic debt, increased from 16.7 percent of GDP in 1982 to 19.9 percent in 1983 and to 22.2 percent in 1984, while the original

CHART 2

BRAZIL

QUARTERLY BALANCE OF PAYMENTS

(In billions of U.S. dollars)



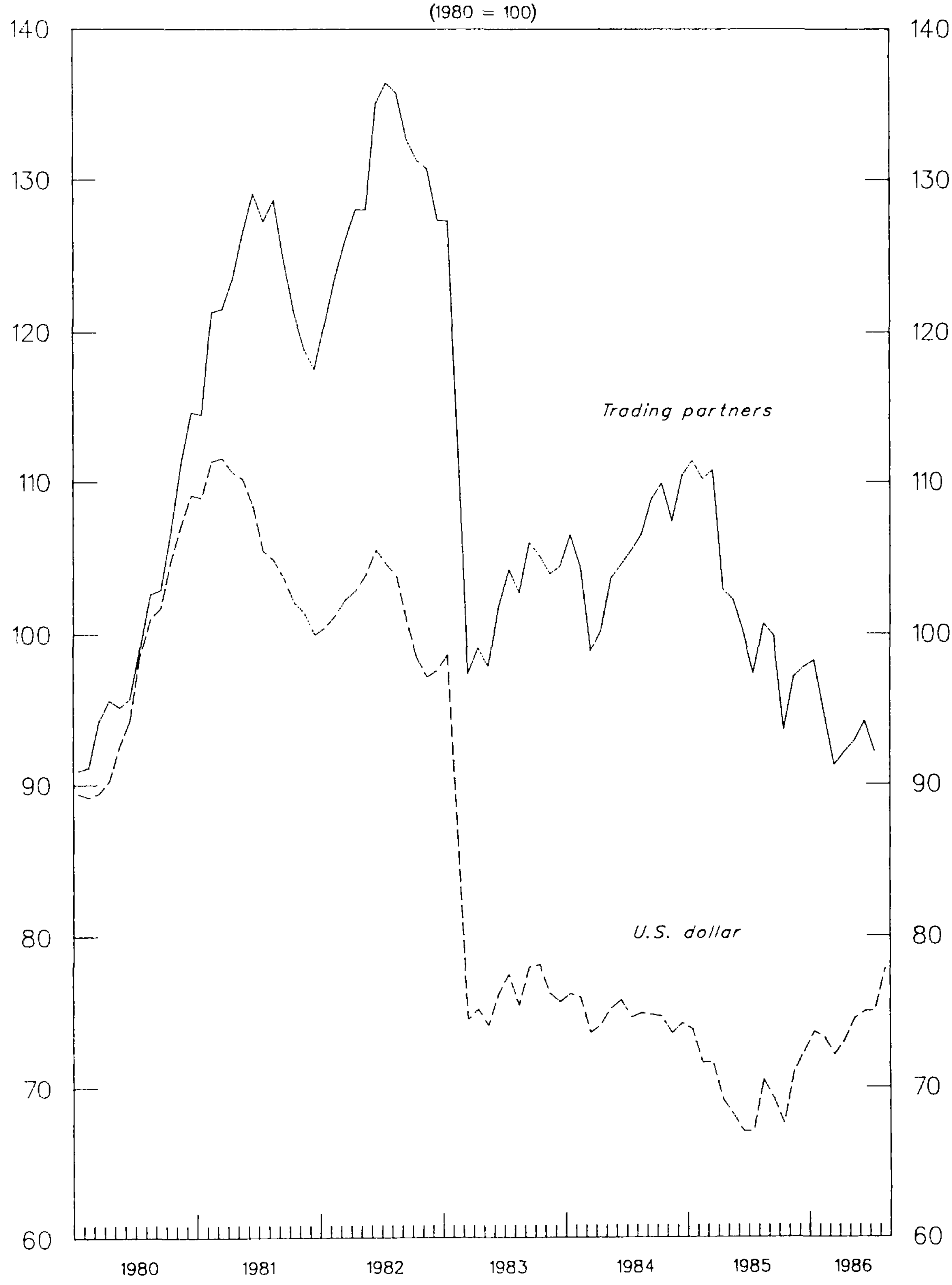
Sources: Central Bank of Brazil; and Fund staff estimates.

CHART 3

BRAZIL

REAL EFFECTIVE EXCHANGE RATE[1]

(1980 = 100)



Source: Fund staff estimates.

[1] Trade-weighted index of nominal exchange rates deflated by seasonally adjusted relative consumer prices. Increase indicates appreciation.

Table 4. Brazil: Supply and Demand, 1981-85

	1981	1982	1983	1984	1985	Prel. 1986
			(Percent change at constant prices)			
Domestic expenditure	-6.5	1.4	-5.6	3.0	7.8	13.3
Consumption	-4.6	3.0	-3.0	2.8	7.1	12.0
Investment	-13.3	-5.4	-17.0	4.1	11.6	19.8
GNP	-4.3	-0.4	-3.0	5.9	8.7	9.1
			(In percent of GDP)			
Domestic expenditure	100.4	100.7	97.6	94.4	94.9	97.4
Consumption	78.2	80.1	80.5	77.9	76.9	76.9
Investment	22.2	20.6	17.1	16.5	18.0	20.5
Private 1/	(13.9)	(11.9)	(10.7)	(10.9)	(12.5)	(...)
Public	(8.3)	(8.7)	(6.4)	(5.6)	(5.5)	(...)
Savings = investment	22.2	20.6	17.1	16.5	18.0	20.5
National	(17.7)	(14.5)	(13.7)	(16.4)	(17.9)	18.7
Foreign 2/	(4.5)	(6.1)	(3.4)	(0.1)	(0.1)	1.8
			(Percent change)			
Memorandum items:						
Real GDP	-3.4	0.9	-2.5	5.7	8.3	8.2
Terms of trade	-15.4	-1.8	-1.9	9.4	--	25.9 3/

Sources: Getulio Vargas Foundation; Bank of Brazil; International Financial Statistics, IMF; and staff estimates.

1/ Includes state public enterprises.
2/ GDP converted into U.S. dollars at average exchange rates.
3/ January-August 1986.

program called for its reduction to 8.8 percent of GDP in 1983 and to 5.5 percent in 1984. The larger deficit reflected higher public sector expenditures on monetary correction, which doubled during 1983-84 to 20 percent of GDP as a result of accelerating inflation and growing public debt. 1/ Practically all of the deficit was financed domestically since foreign resources available to the public sector averaged less than 1 percent of GDP per year during 1983-84. Reflecting these developments the rate of growth of money and quasi money (M2) increased from 115 percent in 1982 to 250 percent in 1984. In the end, price increases were validated by accommodative monetary expansion and the annual rate of inflation reached 211 percent by end-1983 and edged further to 224 percent by the end of 1984.

Efforts were made to influence inflationary expectations through modifications of the wage legislation. The average degree of wage indexation was lowered from 101 percent at the end of 1982 to 80 percent in July 1983, while wage adjustments for productivity increases were limited to the previous year's growth of real GDP (see Table 3). Largely reflecting these adjustments, the real minimum wage decreased by 9 percent during 1983. However, as inflation did not abate, wage legislation was somewhat relaxed, and in November 1983 the average adjustment coefficient was increased to 87 percent and further to 92 percent in October 1984. Anti-inflationary policies were made difficult by the generalized nature of indexation arrangements and the perceived high costs in terms of unemployment of combating inflation by limiting monetary growth in such an environment.

IV. The Cruzado Plan

1. Economic situation on the eve of the cruzado plan

The moderate progress achieved on the domestic front following the implementation of the 1983-84 adjustment program was partially reversed during 1985. The new administration that took office in March 1985 sought to stimulate domestic demand through a relaxation of fiscal, monetary, and wage policies and shielded the external position through frequent small depreciations that offset the effect of rising domestic costs on external competitiveness. The public sector borrowing requirement increased from 22 percent of GDP in 1984 to 27 percent of GDP in 1985, while the operational deficit rose from 1.6 percent of GDP to 3.5 percent of GDP (see Table 2). Concurrent to this, foreign financing of the deficit decreased from 1 percent of GDP in 1984 to

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1/ It should be noted that monetary correction, which affects the numerator of the public sector deficit to GDP ratio, reflects the cumulative monthly inflation rate while GDP, in the denominator, reflects the annual average rate of inflation. In the context of accelerating inflation, this could result in a relatively disproportionate increase in the ratio.

0.5 percent of GDP in 1985. The focus of monetary policy shifted toward the reduction of interest rates and the support of economic expansion and the annual percentage change in M2 reached 270 percent in 1985. Real minimum wages increased in the range of 2 percent (southern region) to 5 percent (nothern region) while average real wage in industry increased by about 6 percent. Reflecting these developments, output increased by more than 8 percent in real terms in 1985 and employment expanded sharply, but inflation also accelerated, and by the fourth quarter of the year the rate of inflation averaged nearly 12 1/2 percent a month (some 310 percent at annual rate).

As inflation accelerated further to an annual rate of 450 percent in the first two months of 1986, top priority was given by the authorities to the control of inflation. The balance of payments position, which registered current account equilibrium in 1985 for the second consecutive year, was projected to be in a very favorable position during 1986, following the continued strong export performance and the fall in the price of imported fuel and in international interest rates. The authorities held also prospects for a balanced result of the public sector following congressional approval of a fiscal package of measures in December 1985. In their view, inflation in Brazil at that time had become purely inertial and could be put to an abrupt end through the elimination of inflationary expectations. To this effect, a price freeze and temporary modifications to the prevailing indexation arrangements were introduced. These measures were supported by measures to increase budgetary control over the operations of the nonfinancial public sector. While not announced as a part of the cruzado plan, immediately after its introduction the system of minidevaluations was discontinued and the nominal exchange rate was fixed vis-à-vis the U.S. dollar at its February 28, 1986 level.

2. Elements of the plan

a. Indexation, wages and prices

Key elements in the 1986 stabilization effort were the establishment of a price freeze and the introduction of modifications to the indexation of financial instruments and wages. Retail prices were frozen for an indefinite period at their February 27, 1986 level, while firms were provided some flexibility to distribute among themselves the expected inflation margins that had been incorporated into wholesale prices prior to the price freeze. Rents and mortgage payments were fixed for one year at the level that maintained their average real value during the preceding 12 months. Indexation arrangements were modified to provide for a temporary deindexation which in most cases amounted to a twelve-month standstill, after which indexation would again be permitted. Different deindexation rules applied to financial instruments and wages.

Indexation of short-term financial instruments was suspended for one year, except for savings accounts. Treasury bonds with a maturity of more than one year were to be fully adjusted on March 1, 1987 for inflation in the preceding 12 months. Financial instruments with a maturity greater than one year were permitted to be indexed to government bonds. A monetary reform was introduced consisting of the adoption of a new currency unit (the cruzado) and a mechanism to convert all nonindexed financial contracts into cruzados in accordance with a conversion factor that sought to eliminate the expected rate of inflation incorporated in such contracts.

As regards wages, the transition to the new system was achieved by converting wages into cruzados at a level 8 percent above what was needed to maintain their average real value during the six months prior to February 1986, with the exception of the minimum wage which was fixed at Cz$804, implying a 16 percent increase over the level needed to maintain its average real value during that period. The new system changed the indexation adjustment period from six months to one year and provided for a mandatory wage adjustment of 60 percent of the inflation accumulated between March 1, 1986 and the date of the wage negotiation, with free collective bargaining above this level. It also established a mandatory and full cost-of-living adjustment to be granted each time cumulative inflation since the last wage negotiation/automatic adjustment reached 20 percent, and which would count against the next annual wage adjustment. Concurrent to this, an unemployment insurance plan was created providing for payment of at least 70 percent of the minimum wage.

b. Fiscal issues

In December 1985 Congress approved a fiscal package which modified substantially the income tax law for the indexation of income tax liabilities. 1/ Tax and withholding rates were lowered substantially and the payment of refunds on 1985 taxes was stretched out over the period 1986-89. The package included measures to accelerate tax collection as well as some new taxes on financial transactions. Most of these measures were geared to avoiding the erosion of real tax revenue in an environment of accelerating inflation. Hence, many of its positive effects did not come to fruition following the introduction of the cruzado plan and the sudden halt to inflation that it brought about.

The cruzado plan targeted a reduction in the operational deficit of the public sector to 0.5 percent of GDP in 1986. This target was to be achieved by eliminating the deficit of public enterprises, by containing the deficit of state and municipalities, and by virtually eliminating the deficit of the central administration. In the authorities' view, measures to this end were part of the December 1985 fiscal package, and

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1/ Up to that time, the law stipulated the indexation of the income tax withheld, but not of the tax liability of any given year; this system led to very high tax rates but also to large refunds at the time income taxes were declared.

no additional fiscal measures were introduced at the time of the program with the exception of some measures designed to improve fiscal control.

Three measures were introduced to increase budget control: (i) the inclusion in the 1986 fiscal budget of most fiscal expenditure carried out previously by the monetary authorities on behalf of the Treasury; (ii) the creation of a National Treasury Secretariat with power to control the budgets of the central administration and the federal and state enterprises; and (iii) the abolition of the open-ended rediscount facility at zero nominal interest rate (conta de movimento) that the Banco do Brasil had maintained at the Central Bank.

V. Developments After the Cruzado Plan

1. Initial outcome

During the first four months of the plan, monthly inflation was reduced to about 1 1/2 percent, the economy was growing at 8 percent in real terms and the external accounts continued to show a strong trade surplus. The unemployment rate was reduced by almost one percentage point in four months and industrial production was growing at 12 percent over its 1985 level. However, rapid growth was being achieved at the cost of overheating the economy. Monetary policy aimed at fixing a 15 percent nominal interest rate in the overnight market (which sets the floor for the interest rate structure in the economy) and resulted in a rapid sell-off by the public of government securities. Higher real wages fueled a boom in consumer demand while failure to eliminate the fiscal deficit put additional pressure on monetary expansion. All these factors resulted in a rapid increase in total financial assets--65 percent at an annual rate during March-June 1986 (Table 5).

The cruzado plan brought about large shifts in the composition of private financial portfolios. Reflecting the decline in actual and expected inflation, the demand for currency and demand deposits increased rapidly at the expense of less liquid assets such as time and savings deposits and government securities. The authorities, which aimed at preventing interest rates from rising in order to hold down public sector debt service payments and to encourage private investment, accommodated this increase in demand. As a result, base money expanded by over 130 percent from end-February to end-June.

The lowering of inflation was accompanied by important distortions in relative prices as a result of the price freeze. The prices of certain goods were fixed at levels below production costs, while domestic demand was accelerating. This situation led the authorities to grant fiscal incentives in the form of subsidies or tax exemptions aimed at restoring profitability in some industries, and to restrain exports or to step up imports of a number of commodities, particularly foodstuffs. In spite of this, illegal premia, scarcities and parallel markets developed. An important area of distortions was public sector

Table 5. Brazil: Selected Economic Indicators, March 1986-February 1987

	1986										1987			
	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April
	(Percent change over previous month)													
Monetary aggregates 1/														
End of period balances														
Base money 2/	35.9	35.3	15.0	10.6	14.1	6.0	2.8	5.2	9.4	3.7	-3.6	-4.7	3.0	10.5
Means of payments 3/	80.1	19.4	15.1	15.8	-0.2	6.8	5.7	6.8	5.1	7.0	-23.2	7.1	10.9	-11.9
Total financial assets 4/	8.7	1.3	3.2	3.9	0.7	4.7	5.3	4.3	2.2	6.2	2.0	14.6	14.9	9.5
Monthly average of daily balances														
Base money 2/	13.5	37.1	23.6	14.7	10.4	8.7	10.7	1.4	3.5	7.2	0.1	-10.5	5.5	6.3
Means of payment 3/	64.0	21.6	17.0	12.3	7.3	5.1	6.5	4.5	3.7	10.0	-12.4	-13.4	3.5	11.3
	(In millions of U.S. dollars)													
Trade performance														
Trade balance	1,136	1,292	1,340	1,072	1,034	1,022	840	210	130	156	129	261	136	520
Exports	2,157	2,172	2,291	2,001	2,209	2,099	1,857	1,341	1,270	1,329	1,259	1,530	1,427	1,660
Imports	1,021	880	951	929	1,175	1,077	1,017	1,131	1,140	1,173	1,130	1,269	1,291	1,140
	(Percent change over same month in previous year)													
Exports	10.2	2.3	2.3	-8.8	1.1	-3.3	-22.8	-43.4	-44.6	-41.3	-34.1	-12.6	-33.8	23.6
Imports	-4.0	-15.9	-5.5	-3.7	22.8	0.4	-7.7	-10.0	-6.1	-18.5	-6.5	12.4	26.4	29.5
	(In percent)													
Real sector														
Unemployment rate	4.4	4.2	4.1	3.8	3.6	3.5	3.2	3.0	2.6	...	...	...	...	...
	(Percent change over same month in previous year)													
Industrial production	9.5	12.0	11.8	12.0	11.9	11.4	12.0	11.8	11.3	...	...	...	...	...

Sources: Central Bank of Brazil; IBGE; and Fund staff estimates.

1/ The definition of the monetary aggregates in this table follows the Brazilian reporting format which differs somewhat from IMF definitions.

2/ Currency outside the Central Bank and reserve deposits of the banking system.

3/ Money supply (M1) plus demand deposits of the public sector and financial institutions and vault cash of the Bank of Brazil, other commercial banks, savings banks, and the BNCC.

4/ Includes means of payments, time and savings deposits, letters of credit, housing bonds, Federal securities held by the public, and state and municipal bonds.

prices and tariffs. Increases in electric power and telecommunications tariffs, steel, wheat and alcohol prices, which had been scheduled to take place prior to the price freeze, were not implemented. As a result, they were frozen at levels that placed a burden on public finances.

During the first half of 1986, the public sector registered an overall deficit (PSBR) of about 7 percent of GDP, while on an operational basis the deficit was reduced to less than 1 percent of GDP. The operational performance benefited from the high level of economic activity, the decline in interest rates and oil prices and the effect of measures taken in December 1985 to advance the collection of certain taxes and postpone certain payments of refunds on 1985 taxes. These developments largely offset the negative consequences on financial tax revenues and on the financial performance of public enterprises that resulted from the introduction of the cruzado plan.

2. Mid-course corrections

A mid-course correction to the plan was put in place in July 1986. Monetary conditions were tightened and interest rates were increased in order to restrain demand. In addition, a forced savings scheme was introduced, consisting of compulsory levies on the consumption of certain items (gasoline, automobiles and foreign travel) aimed at providing an additional source of finance for public sector investment. In spite of this, the consumption boom continued virtually unabated, productive capacity limits in an increasing number of industrial subsectors began to be reached, labor markets became tight and the trade balance began to deteriorate.

Beginning in June 1986 the trade balance slipped behind 1985 performance and the deterioration accelerated as the year progressed. The trade balance fell from a monthly average of US$1,150 million during the six-month period ending in August, to US$840 million in September and US$210 million in October (see Table 5). Exports suffered from buoyant domestic demand and a loss in competitiveness, while non-oil imports increased at an annual rate of over 30 percent. The loss in export competitiveness resulted from a widening inflation differential between Brazil and its trading partners at a time when the exchange rate was fixed vis-à-vis the U.S. dollar. The extent of the overvaluation cannot be readily quantified since actual inflation went well beyond the recorded increases in the official price index due to the widespread practice of charging illegal premia concurrent with emerging shortages of commodities.

Following national elections in mid-November 1986, more fundamental measures were introduced with a view to arrest the rapid deterioration in the domestic and external position. These included fiscal and exchange rate action as well as changes to wage and financial indexation.

On the fiscal side, the package aimed at reducing the public sector deficit through higher revenues and containment of expenditure. Indirect taxes on a number of goods (cigarettes, new automobiles, alcoholic beverages) were substantially increased and new indirect taxes were introduced on gasoline and alcohol fuel. In addition, the authorities increased the price of sugar and adjusted electricity tariffs, telephone rates and postal rates. A number of measures to cut costs and increase efficiency within the public sector were also announced, including the closing of some public sector agencies and enterprises, and the establishment of limits on the contributions of state entreprises to pension funds of their employees. For 1986 as a whole, the overall financing requirement of the public sector declined from 27 percent of GDP in 1985 to under 10 percent, largely on account of lower interest payments; the July fiscal measures together with under-execution of public sector expenditures resulted in a reduction of the operational deficit from 3.5 percent of GDP to an estimated 3 percent of GDP. The November package was expected to improve substantially the operational public sector deficit in 1987, although its final impact hinged on how demand would respond to the increases in prices resulting from these measures.

On the external side, tax incentives were granted for firms in the export sector and, more importantly, the practice of daily mini-devaluations of the cruzado vis-a-vis the U.S. dollar, which had been abandoned in February 1986, was reinstated. 1/ As regards indexation arrangements, the probability that inflation would activate the trigger for automatic wage adjustments was reduced by determining that unofficial wage increases granted since the introduction of the plan, which appear to have been substantial for most labor categories during 1986, would also be deducted from inflation (along with official wage increases) for determining when the 20 percent trigger would be activated for any particular labor category. In addition, changes were introduced in financial indexation arrangements by decreeing that the adjustment to the value of the government bond on March 1, 1987--and of all contracts tied to this bond--was to be made according to inflation during March-November 1986 and to the floating yield of the central bank bill (LBC) during December 1986-February 1987. Finally, a number of tax-deferred savings instruments were created to encourage long-term savings, and the authorization for firms to have access to passbook savings accounts was reinstated.

The November measures did not seek the elimination of the relative price distortions emanating from the price freeze. Since August the distortions had been aggravated by hoarding and speculative stockbuilding in anticipation of expected price adjustments and Christmas sales. The choice of name brand products available to the consumer shrank and overcharging became a widespread practice, which rapidly strained the

1/ Prior to this, a small one-step devaluation was implemented in October.

credibility of the program. The emphasis of the November package on sharp adjustments in prices of only a few products exacerbated expectations of a more general adjustment of prices. Pressure built up for the correction of these distortions and the authorities gradually liberalized prices in early 1987.

Inflation rose steadily since September 1986 and increased rapidly toward year-end. In January 1987, the consumer price index registered the highest monthly rate of increase in its history--17 percent. In the following month indexation of short-term financial assets was reintroduced. The external accounts showed also a marked deterioration in spite of substantial windfall gains from lower oil prices and lower international interest rates. During November 1986-February 1987 the monthly average trade balance fell to US$170 million compared with US$910 million during the same period in the previous year. Following important losses in international reserves, on February 20, 1987, the authorities declared a temporary suspension of interest payments to foreign commercial banks.

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Part D. Recent Experience with Inflation Stabilization in Israel

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I. Introduction

The Israeli economy has been plagued by inflation for over 12 years and the accelerating price increases in a series of jumps became a permanent feature in the country. Inflation, as measured by changes in the consumer price index (year-end), rose from less than 6 percent a year in the 1960s to about 13 percent a year from 1970 to 1972. After the Yom Kippur War it accelerated to almost 30 percent in 1973 and fluctuated between 30 percent and 60 percent annually during the period 1974-78. Following the second oil price shock, prices rose steeply by 111 percent in 1979 and thereafter stabilized between 100 percent and 135 percent annually from 1980 to the fourth quarter of 1983. The largest jump in prices occurred in the last quarter of 1983 when inflation reached over 480 percent (on annual basis), continuing this rate during 1984 when prices rose by 445 percent.

The new "National Unity Government," which took office in September 1984, introduced a series of disinflationary programs by reaching an agreement with the employers' and workers' federations on a wage-price freeze and some cuts in budgetary expenditure. Although these programs initially achieved some success in reducing inflation, prices rose rapidly again, averaging a monthly rate of about 12 percent during the first half of 1985. Concommitantly, capital outflows intensified and the balance of payments weakened considerably. In response to the deteriorating situation, at the beginning of July 1985, the Government introduced a comprehensive economic stabilization program incorporating a wide-range of fiscal, monetary, and incomes policies with the objective of dealing simultaneously with inflation and balance of payments problems. Some action was also taken to liberalize foreign trade transactions. The immediate results of the plan have been spectacular, the average monthly rate of inflation dropped from over 15 percent during the first half of 1985 to 2 percent in the last quarter of 1985, and to slightly over 1.5 percent in 1986.

This paper describes and analyzes the inflationary process in Israel and the various attempts to eliminate it. Section II discusses the reasons for the persistent high rate of inflation and the step jumps process in Israel, the various attempts to reverse this process, and the reasons for failure. Section IV describes the details of the economic stabilization program announced in early July 1985. Section V reviews the developments under the program and additional measures introduced in 1986. Preliminary conclusions are given in the last section.

II. The Causes of Inflation in Israel

1. The nature of inflation

The inflationary process in Israel over the last 12 years is a very complex subject and influenced by many factors including the structure of the economy, institutional arrangements, defense considerations, external forces, and the changes in policy measures. It would be impossible to measure or quantify the effect of each factor separately, but several explanations can be given for the overall developments. The persistence of high inflation during periods of contraction in demand and slowdown in economic activity is explained by the fact that protracted inflation had led to the development of inflation-proofing devices in many areas of the economy and caused deeply seated inflationary expectations. Some of these devices became institutionalized, such as the COLA arrangements, the adjustment of tax brackets, pensions, tax credit points; the linkage of bonds, foreign currency clauses, and long-term savings. Furthermore, as inflation worsened, these devices improved through more frequent adjustments and at higher rates. In other periods of expanding demand, inflation rose in steps to new higher levels as these surges in demand were automatically accommodated by a steady monetary expansion, which was quickly translated into price increases. These jumps in prices were further intensified by the frequent increases in basic commodities and fuel prices, and by exchange rate adjustments.

Another factor to consider in the Israeli context, is the heavy defense burden, equal to over one-fourth of GNP since the Yom Kippur War. (During the mid-1970s it amounted to over one third of GNP.) In addition, about one-third of Israel's debt repayment burden is defense related. Also, domestic defense spending is greatly underestimated because it is difficult to quantify the real costs of reserve duty and the loss to the economy due to the diversion of manpower and resources to the defense effort for short periods.

2. The character of inflation

There are several characteristics of inflation in Israel over this period. First is the tendency for inflation to hold relatively steady for several years but shift in steps over comparatively short periods to successively higher plateaus. Second is the large government deficit that affected most macroeconomic areas, particularly the monetary sector. However, despite the high inflation rate, the deficit has been financed only fractionally by money creation. Although part of the financing was covered by printing money, it was mostly financed by selling linked bonds and foreign currency to the public. On the other hand, the Government has granted unlinked loans, whose real value was eroded by inflation. Third is that inflation has been highly responsive to cost demand pressures, as the linkage between wage and price movements has become more complete. Comprehensive indexation arrangements of financial assets resulted in that inflationary shocks have been largely accommodated automatically by the monetary aggregates. Fourth, given the large proportion of imported goods and products subject to price controls in the CPI, a change in subsidization and exchange rate policies have caused sharp price changes, especially when these policy changes tended to aggravate inflation rather than reduce it. Fifth is the authorities' preoccupation with maintaining low unemployment and the raising of living standards that has excluded appropriate anti-inflationary policies that would not lead to a deterioration in the balance of payments.

The inflationary process in Israel must be analyzed in terms of two sets of factors: those tending to put upward pressure on the inflation rate and those tending to produce the large changes in the inflation levels. The most important factor in the first set is the pressure of demand. The persistent large budget deficits create imbalance in the economy, which in periods of flexible exchange rate policy protect the balance of payments but result in pressure on prices and is usually accommodated by the expansion of monetary aggregates. Also, an additional source of excess pressure on the economy is the increasing level of real wages, which has probably been too high to permit full employment and a competitive external sector without generating upward pressure on prices.

The factors responsible for the step increases in the levels of inflation have probably been the indexation system, changes in economic policies, and internal and external shocks. Most economists now agree that the shifts from one inflation level to a higher level in Israel have been generated largely by price shocks stemming in part from external factors--including higher energy prices--but more importantly for policy actions, especially changes in tax rates, the exchange rate and in the degree of subsidization of basic goods and services. Because that almost all (95 percent) financial assets are linked either to the consumer price index or to the exchange rate, any increase in prices, of whatever origin, are automatically accommodated by increases in liquidity and financial wealth and spending behavior is not constrained by real wealth effects as in a nonindexed environment. The impact of wage indexation is much less important, as it is only a partial indexation and with a considerable lag. However, overall wage policy has played a crucial role in the inflationary prices because of the large discretionary wage awards that have been granted, in some cases, to compensate for future inflation.

3. The causes and factors of inflation

a. Fiscal imbalances

The impact of inflation on the central government budget and, in turn, the impact of the budget deficit on inflation, are not easy to measure. It is widely accepted that the large government deficit has been the primary cause of the persistence of high inflation rates, but has not been responsible for the shifts from one level to higher levels. It is also widely accepted that only a sharp reduction in the budget deficit will produce the desired stabilization of prices. However, some argue that reducing the budget deficit alone will not stabilize prices because of the inflationary inertia component that causes a downward rigidity in prices. Therefore, it should be accompanied by the freezing of wages, credit, exchange rate and prices in order to break the downward price rigidity and successfully combat the inflationary pressure.

(i) The impact of high inflation on the budgetary process, expenditure, and expenditure controls

The existence of very high and volatile rates of inflation for long periods has created major problems in preparing, presenting, monitoring, and executing Israel's budget. Over the last three fiscal years the budget has been prepared in constant prices of the first quarter of each fiscal year. However, even these constant prices were estimated a few months in advance. Subsequently, the expenditure figures were adjusted quarterly according to various indices compensating fully for underestimation in the previous quarter and allocating funds for the remainder of the fiscal year at new constant price level. Of course, this mechanism of quarterly adjustment resulted not only in the validation of inflation, but also made it very difficult to determine the level of expenditure commitments. Indeed, entering into multi-year commitments in periods of high inflation created very serious problems in budget management. The existing accounting system was not built to handle this situation and ad-hoc steps had to be taken to monitor these commitments. Essentially, under these conditions the only real control on expenditure is on cash operations through a monthly quota set by the Accountant General's Office.

(ii) Revenue collection and high inflation

The experience of the last three years demonstrates that despite all of the measures taken to counterbalance the impact of inflation, the net effect has been lower revenue although it affected the various categories of taxes differently. Only additional discretionary measures, including new taxes and increase in rates, kept revenue from falling even lower. Almost all taxes are collected with lags ranging from a few days to one year. The real tax "losses" from these lags increase with higher rates of inflation. As a result, it becomes very profitable to delay tax payments as long as possible, even with the risk of paying high penalties. Also, the tax administration is most likely to deteriorate in periods of high and variable rates of inflation, if not for other reasons, just because the accounting procedures for enterprises and the profit and loss statements are becoming extremely complex and it is difficult to determine what is real gain or what are the nominal adjustments.

The Israeli authorities have introduced new measures and administrate procedures to reduce as far as possible the losses and to cope with the problems of high and variable rates of inflation as well as with tax evasion. Nevertheless, they emphasized that generally, when the rates of inflation increase, revenue collection declines in real terms and vice-versa. The more important methods adopted to reduce the lag between the due date and the day of payments are the pay-as-you-go system, deduction at the source of payment--as is the case of interest discretionary wage awards. In fact, the partial cost of living adjustment resulted in an erosion in real wages by as much as 14 percent annually between 1977 and 1985; only the large wage awards generated the real increase in wages during most of this period (Table 1). Therefore, it can be concluded that wage indexation has not been an important inflationary factor in recent years. It has been argued that wage indexation in Israel may have improved rather than hindered real wage flexibility. On several occasions, the Histadrut agreed to take a real wage cut by temporarily foregoing indexation. Most recently this happened in July 1985 when the Histadrut, compelled by a Government emergency decree, agreed to a three-month suspension of the COLA mechanism. Such coordinated real wage reductions might be harder to achieve in the absence of indexation.

(ii) Indexation of financial assets

Almost all of the financial assets in Israel are linked to the exchange rate or the consumer price index. Although the indexation of liquid assets started in the mid-1950s, the prolonged and accelerating rate of inflation since 1973 prompted the public to increase the proportion of indexed assets in its liquid portfolio to 85 percent at the end of 1984. Medium-and long-term financial assets are almost 100 percent indexed. Because of the substantial deficits incurred by the Central Government over a long span of years, its domestic and external debt has risen to very high levels. Relative to GNP, it is estimated that the Government's debt averaged 218 percent during fiscal year 1984-85, of which about two thirds is domestic debt. At the end of 1985, 70 percent of the Government's internal debt was indexed to the CPI, 6 percent to the U.S. dollar, 11 percent to a combination of the domestic price and U.S. dollar indices (according to the savers' choice), and 13 percent to a basket of foreign currencies.

The costs of financial indexation, in terms of facilitating and fueling the inflationary process are generally accepted and clear. However, some economists in Israel have argued that it was the Government's expansionary policies and not indexation that were most responsible for the inflationary process. Nevertheless, all economists recognize the negative effects of financial indexation. To start with, the scope of exchange rate policy has been limited by the direct and indirect linkage of large shares of total deposits to foreign currency, which as a result of a devaluation led to a faster rise in monetary aggregates and higher inflation. This created a dilemma for the authorities to choose between external competitiveness and inflation. If for any reason the exchange rate is appreciated, the attempts to return to the equilibrium level was transmitted into excess liquidity and increase in prices. Thus, because of this linkage the rate of inflation in Israel was very sensitive to any internal or external price shocks.

Another major cost of financial indexation has been the almost complete erosion of control of the financial aggregates by the monetary

Table 1. Israel: The Effects of Wage Indexation on Real Wages 1/
(Annual rate of change)

	1977	1978	1979	1980	1981	1982	1983
Total change in wages	45.7	57.9	82.2	131.5	142.1	120.2	155.7
a. Cost-of-living allowances	23.7	33.4	42.3	93.6	96.2	85.7	105.3
b. Other components	17.8	18.4	28.0	19.6	23.4	18.6	24.5
Consumer price index	34.6	50.6	78.3	131.0	116.8	120.4	145.6
Change due to COLA as percent of CPI change	68.5	66.0	54.0	71.5	82.4	71.2	72.3
Change in real wages	8.2	4.8	2.2	0.2	11.7	-0.1	4.1
a. Cost-of-living allowances 2/	-8.1	-11.4	-20.2	-16.2	-9.5	-15.7	-16.4
b. Other components	16.3	16.2	22.4	16.4	21.2	15.6	20.5

Sources: Bank of Israel and the Histadrut.
1/ Business sector
2/ Measure the extent to which application of COLA clauses alone would have affected the real wage.

authorities. Because of the low share of unlinked assets in the public's financial holdings, the sheqel base in the financial system is very small (averaging less than 3 percent of GNP during the 1980s) and has greatly hampered the conduct of monetary policy. The linking of financial assets to the CPI and to the foreign exchange ensures an automatic accommodation of the money supply to the higher prices.

III. The Inflationary Process in Israel

1. The origin of inflation, 1974-77

The economy of Israel experienced severe internal and external imbalances in 1974 because of the 1973 war and the soaring price of oil and other primary commodities in world markets. The CPI, after rising by less than 3 percent annually during the late 1960s, rose to about 12 percent in the early 1970s, more or less in line with world inflation. In the wake of the Yom Kippur War in 1973 and the oil price shock which resulted in the swelling of public sector expenditure. The rate of inflation rose to 56 percent in 1974, and the external current account deficit widened to the equivalent of 24 percent of GNP. In response to the deteriorating economic situation, the Government initiated a policy of gradual stabilization with the objective of reducing the current account deficit in the balance of payments and lowering inflation while maintaining close to full employment. Measures taken included successive devaluations of the currency (from IS 0.42 per dollar in 1974 to IS 1.03 per dollar in October 1977) and increasing indirect taxes on domestic production and imports. These efforts resulted in a substantial improvement in the balance of payments where the current account deficit was reduced to US$1.7 billion or about 15 percent of GDP in 1977, notwithstanding the sharp increase in the imported oil bill.

Progress in other areas proved to be much more difficult. Despite the sharp increase in taxes (an average of 8 percentage points of GNP over this period), expenditure skyrocketed and the budget deficit averaged over 20 percent of GNP. Defense expenditure, after increasing by close to 10 percentage points of GNP after the 1967 war, jumped again by the same amount after the Yom Kippur War, averaging about 30 percent of GNP during 1975-77. At the same time, expenditure on social welfare programs continued to increase and employment in the public sector expanded rapidly. Developments in the real economy also were not favorable. Real economic growth averaging more than 12 percent annually over the period 1968-72 declined to about 4 1/2 percent annually in 1973-75 and almost stagnated in 1976-77 (Table 2).

The most disappointing feature of this period was the intractable nature of inflation, inflationary expectation became deeply entrenched and the public developed mechanisms to protect itself against the adverse impact of inflation. Existing institutional compensatory and indexing arrangements such as cost of living allowances, financial asset

Table 2. Israel: Selected Economic Indicators, Annually 1968-1986

(Percentage changes, unless otherwise indicated)

	1968-72	1973-78	1979	1980	1981	1982	1983	1984	1985	1986 Prel.
Prices										
Average	7.1	36	78	131	117	120	146	374	305	48
During period	8.1	39	111	133	101	131	191	445	185	20
GDP at constant prices	12.0	3.6	4.7	3.5	3.8	0.5	2.5	1.7	2.8	2.2
Average exchange rates (in relation to US$)	3.8	29	47	102	123	112	132	421	302	26
Gross domestic Investment at constant prices	24.0	-1.8	12.0	-14.1	-5.8	13.8	12.0	-7.5	-13.6	8.1
Unemployment	--	3.3	2.9	4.8	5.1	5.0	4.5	5.9	6.7	7.1
Real wages	--	--	9.5	-3.2	10.4	-0.9	6.1	-0.4	-9.0	11.6
Public sector	--	--	15.6	-8.4	10.4	-4.8	9.4	1.3	-14.1	13.8
Business	--	--	5.9	-0.3	10.4	1.2	3.0	-1.0	-5.0	7.5
Money and credit										
Money base	23	25	14	107	100	103	131	454	661	32
Money supply	17	30	31	98	78	111	132	352	277	113
Total liquid assets of the public	21	38	86	150	109	128	217	458	194	45
Bank credit to the public	18	50	101	110	82	139	133	503	172	46
Balance of payments (billions of U.S. dollars)										
Exports	0.9	2.6	4.7	5.8	5.9	5.6	5.5	6.2	6.6	7.6
Imports	1.8	4.5	7.9	9.0	9.4	8.8	8.8	8.8	9.0	9.6
Trade balance	-0.9	-2.2	-3.2	-3.2	-3.5	-3.2	-3.3	-2.6	-2.4	-2.0
Goods and services	-0.9	-2.5	-3.7	-3.8	-4.4	-4.8	-5.2	-4.9	-3.9	-4.0
Current account balance	-0.3	-0.9	-0.9	-0.8	-1.5	-2.2	-2.3	-1.5	1.1	1.4
(percentage of GNP)	(-5.5)	(-7.2)	(-5.0)	(-4.0)	(-6.8)	(-9.9)	(-9.3)	(-6.9)	(5.2)	(5.3)

Sources: Central Bureau of Statistics; and Bank of Israel linkages coupled with frequent adjustment of the exchange rate transferred cost pressures into price increases. The existing large public deficits plus an abundance of liquidity permitted the continuation of the inflationary spiral. As all these factors were prevalent in the Israeli economy during this period, consumer prices rose by an annual average of 35 percent during 1974-77 (See Table 2).

2. The reform and transition period, 1978-79

At the end of 1977 an economic reform plan was introduced, but instead of being comprehensive and covering all areas of the economy it concentrated on the external sector with important implications for the financial system. The main features of the reform were the liberalization of foreign exchange control and a change in the exchange rate regime from the crawling peg system to a floating exchange rate. The rates for all foreign currency dealings were unified, eliminating special export subsidies and reducing import tariffs. For the first time, Israeli citizens were allowed to hold foreign currency accounts at home and abroad. Moreover, this liberalization was accompanied by a major (50 percent) devaluation of the Israeli pound. However, this reform and the exchange rate adjustment was not supported by restrictive fiscal and monetary policies or by appropriate incomes policies. On the contrary, wages continued to rise in real terms and domestic demand expansion was stimulated by capital inflows and government policies which resulted in an explosion of domestic liquidity. Also, the deterioration in the terms of trade due to the severe oil price shock in 1979, which was accompanied by the return of the Sinai oil fields to Egypt, intensified upward pressure on prices. Therefore, it is not surprising that inflation more than doubled from less than 50 percent in 1978 to over 100 percent in 1979. Moreover, during the second half of 1979 it averaged more than 150 percent on annual basis.

3. The period of high but stable rate of inflation, 4th quarter 1979-3rd quarter 1983, and the attempts to introduce stabilization programs

a. Overall developments

The expansionary policies pursued by the Government in 1978-79 resulted not only in higher inflation, but also in a sharp deterioration in the balance of payments. After the initial jump in the level of inflation during the second half of 1979, it remained remarkably stable at the higher triple digit figures (120-130 percent annually) over the next three years (See Table 2). Indeed, the variability of the inflation rate was much less pronounced over this period than over the preceding or following two-year periods. However, this period was also characterized by a sluggish level of activity, increasing unemployment (albeit still low), the growth of current account deficit, and the external and internal debts. Attempts were made over this period to reduce inflation or to narrow the current account deficit of the balance of payments. Although registering a temporary partial success in each of these endeavors, the failure by the Government to pursue persistent restrictive fiscal and monetary policies on one hand, and the fear that a comprehensive stabilization program would result in unacceptably high levels of unemployment, on the other hand, resulted in the avoidance of further rises in the price level over this period; however, this proved to be self-defeating in the long-run as it created the conditions for the balance of payments and financial crises, and price explosions in late 1983 and in 1984.

The overall economic situation over the four-year period can be characterized as one of chronic excess demand (with a short exception in 1980), reinforced by cost-push pressure. Also, the excess demand was exacerbated by a deterioration in growth performance. The large and increasing budgetary deficit was a major contributor to the excess demand, and the rapid growth of real income played a major role as well. On the cost side, pressure from real wages and from external shocks has accelerated the spiral further. Meanwhile, in response to the higher levels of inflation, wages and financial indexation have moved closer to completeness and the lags in indexation have shortened. At the same time, unindexed monetary assets fell to very low levels and money growth became largely endogenous to the system. Monetary policy was thus able to exercise very little control over real value of monetary assets and inflation was broadly accommodated by the growth of monetary aggregates.

b. The 1980 stabilization effort (the Hurwitz Plan)

In response to the acceleration in inflation and the deterioration in the balance of payments situation, a new Finance Minister, Mr. Y. Hurwitz, was named at the end of 1979; he immediately introduced a stabilization program. The major objectives were to blunt the erosion in the balance of payments and to tone down inflation. The program included sharp cuts in subsidies and transfer payments, increase in taxes, and cuts in real wages. At the same time, monetary policy turned to be more restrictive and a freeze on domestic credit was imposed. This restrictive policy stance was held through most of 1980. However, despite continued efforts at expenditure controls and a 2 percentage points of GNP reduction in total expenditure, fiscal policy again turned out to be more expansionary than intended. Therefore, a continued tight credit policy was forced to bear most of the burden of containing demand pressure, and the whole weight of credit restraint was again placed on the private sector.

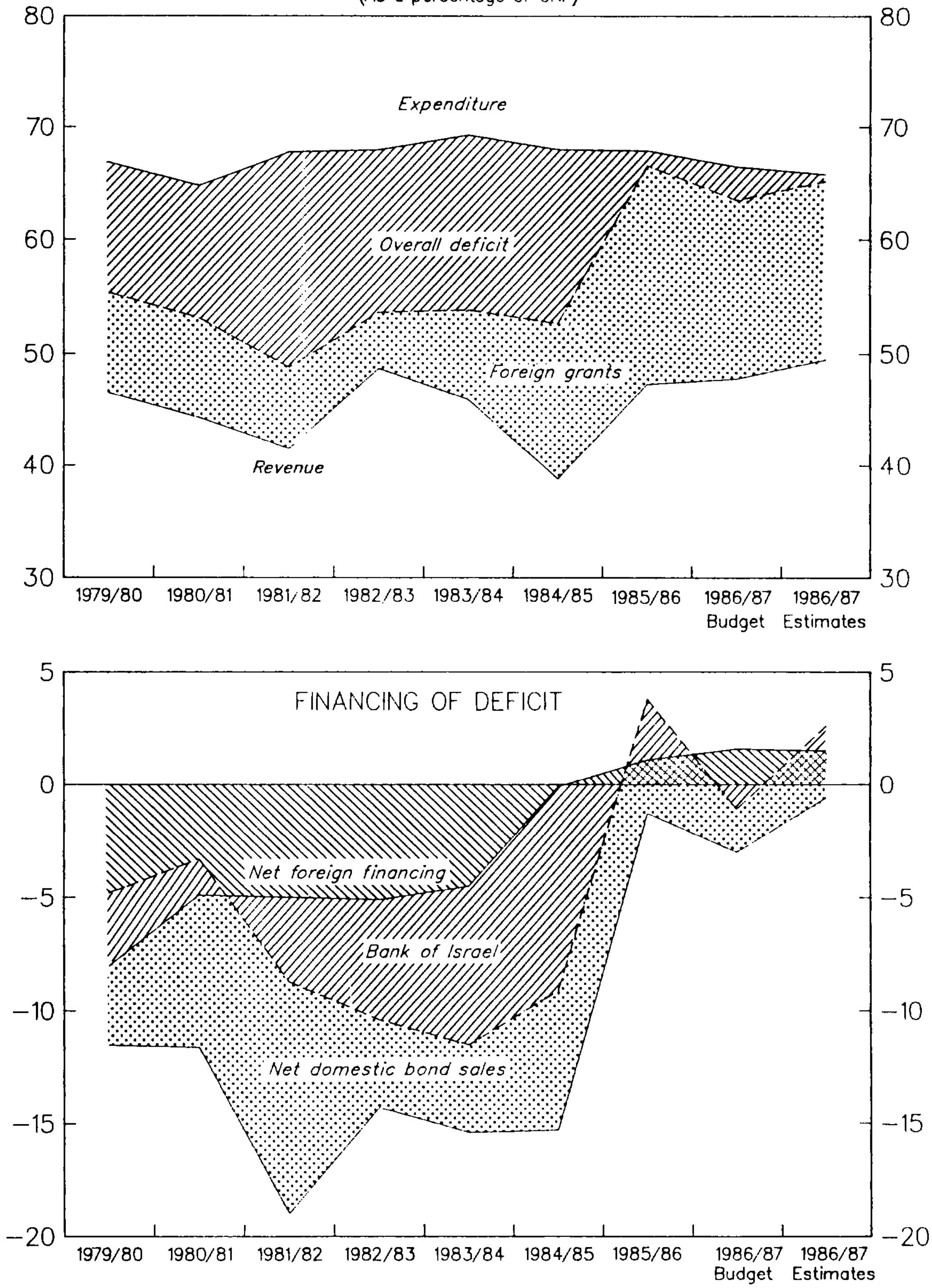
These policies had quick effects on the economy as they sharply depressed economic activity: unemployment nearly doubled, real wages fell, the worrisome deterioration in the balance of payments was arrested, and the accelerated increase in consumer prices was stabilized at the level prevailing in the second half of 1979. The fall in income and the rise in unemployment made the restrictive policies very unpopular and with the approaching election, the Minister of Finance was replaced by the end of 1980, and with it ended the period of austerity.

CHART 1

ISRAEL

CENTRAL GOVERNMENT OPERATIONS

(As a percentage of GNP)[1]



Source: Data provided by the Ministry of Finance.

[1] GNP data adjusted to fiscal year (April–March) basis.

c. The 1981-83 controlled inflation period ("correct economics" or the Aridor Experiment)

Considering the strong improvement in the balance of payments in 1980 and the coming elections, the first priority of the authorities shifted toward the reduction in the rate of inflation. However, the new economic team headed by Mr. Y. Aridor, was convinced that inflation was generated mostly by expectation and inflation could be reduced and eventually stopped by pursuing a determined policy to change expectations. The policy instruments chosen for this purpose were slower devaluations, a reduction in tax rates, and an increase in subsidies on basic products. Accordingly, at the beginning of 1981, the Government lowered indirect taxes levied on numerous consumer products, especially durables, and increased the subsidies on basic items. To stimulate economic activity, it reduced income tax rates and increased real wages in the public sector. These measures initially led to an immediate slowing of price increases. Subsequently, this policy caused the fiscal deficit to increase, which in turn generated larger liquidity in the economy (Chart 1).

The economic situation changed dramatically in 1982 and the problems facing the economy became more acute--a sluggish economy combined with high inflation and growing levels of current account deficit and external debt. Real GDP rose by less than 1 percent while inflation returned to its 1980 level of 130 percent (See Table 2). The war in Lebanon contributed to these adverse developments. To counteract the expansionary influence of the larger domestic defense spending, a series of tax measures were implemented during the second half of 1982 (raising tax revenue by almost 4 percentage points of GDP in fiscal year 1982/83) and expenditure for subsidies and transfer payments were reduced considerably (Table 3). However, these measures also resulted in the acceleration of price increases during the second and third quarters of 1982.

In view of the reduction in government deficit and the persistent inflation in September 1982, the authorities again attempted to reduce inflationary pressures from the cost side. The policy instruments chosen for this purpose were a slow depreciation of the sheqel (5 percent per month), a modest increase in controlled prices (mostly involving a change in the level of subsidies), and maintaining nominal interest rates stable. These measures were followed by an agreement to adjust the cost of living allowance according to the rise in prices in the preceding quarter, instead of the average rise in the previous two quarters. The idea was that the new arrangement would curb the growth in real wages when inflation is decelerating. The basic theory behind this experiment was that inflationary expectations would convert around 5 percent monthly and then they could be brought down again to a lower level.

Despite the steady implementation of these policies from September 1982 to July 1983, the CPI continued to climb at 128 percent on an

Table 3. Israel: Developments in the Main Budget Aggregates 1/

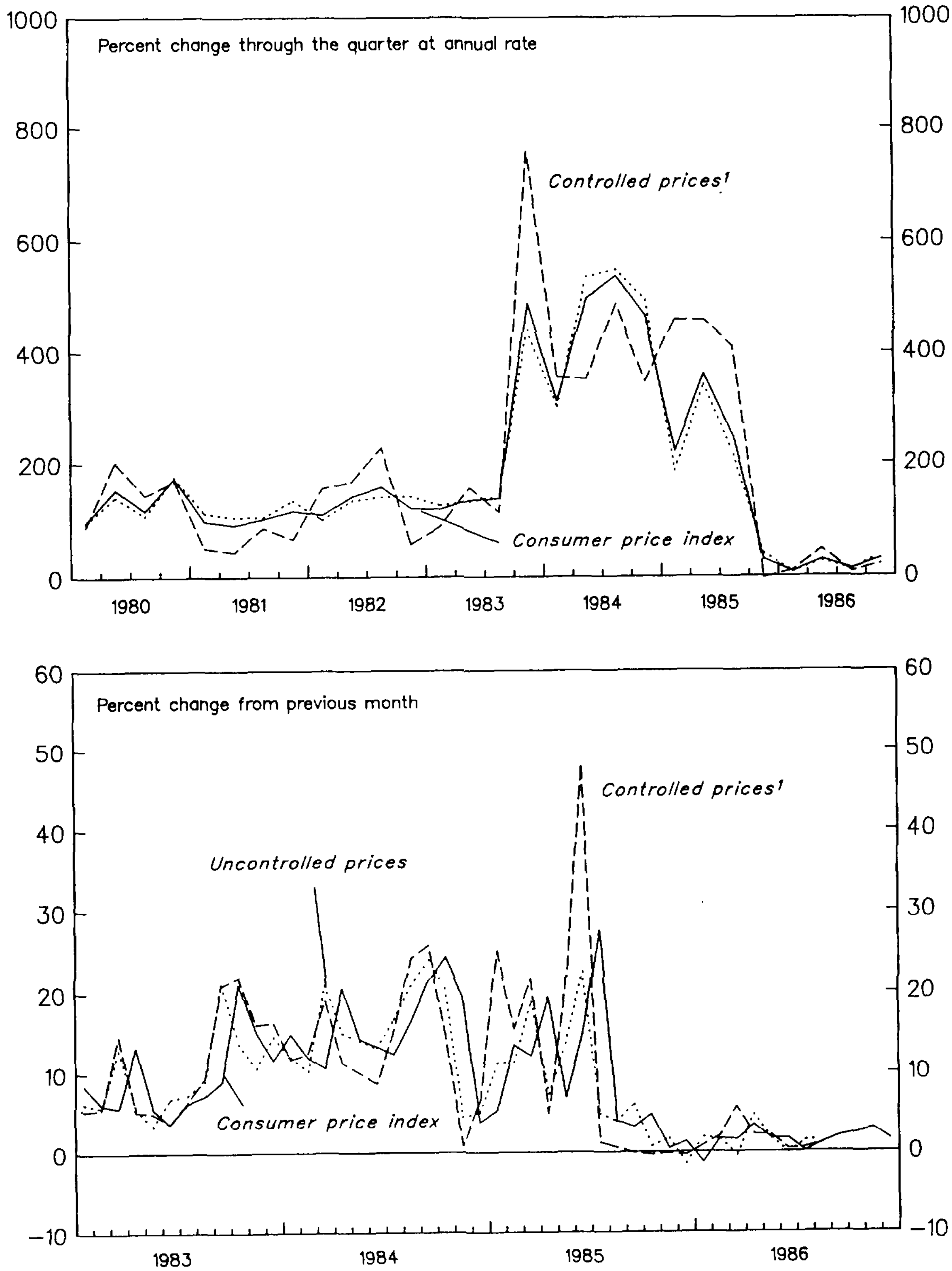
(In percent of GNP) 2/

	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	Budget Proposal 1986/87	Est. 3/ 1986/87
Total revenue	44.7	46.5	44.3	41.5	48.7	45.9	38.8	47.3	47.8	49.5
Tax revenue	38.7	39.5	35.7	35.3	38.8	37.5	34.1	39.9	40.4	44.0
Other	6.0	7.0	8.6	6.2	9.9	8.4	4.7	7.4	7.4	5.5
Total expenditure	64.7	66.9	64.8	67.8	68.0	69.3	68.0	67.9	66.5	65.8
Civilian	42.4	40.5	40.7	46.2	47.5	48.3	46.7	45.9	47.1	46.0
Domestic	39.4	37.9	37.5	43.2	42.2	42.7	38.9	38.5	40.3	39.5
Abroad	3.0	2.6	3.2	3.0	5.3	5.6	7.8	7.4	6.8	6.5
Defense	22.3	26.4	24.1	21.6	20.5	21.0	21.3	22.0	19.4	19.8
Domestic	12.6	13.7	12.8	12.8	14.4	11.8	11.0	11.8	11.4	11.3
Abroad	9.7	13.0	11.3	8.8	6.1	9.2	10.3	10.2	8.0	8.5
Budget balance	-20.0	-20.4	-20.5	-26.3	-19.3	-23.4	-29.2	-20.6	-18.7	-15.0
Foreign grants	5.9	8.9	8.9	7.3	5.0	8.0	13.9	19.3	15.7	15.7
Financing requirement	-14.1	-11.5	-11.6	-19.0	-14.3	-15.4	-15.3	-1.3	-3.0	-0.6
Foreign borrowing, net	9.0	8.0	4.9	5.0	5.1	4.5	0.1	-1.1	-1.6	-1.5
Domestic bonds, net	5.1	6.7	8.3	10.3	3.9	3.9	6.2	5.1	4.1	3.2
Bank of Israel, net	--	-3.2	-1.6	3.7	5.3	7.0	9.0	-2.7	0.5	-1.1
Memoranda Items										
Domestic deficit	-7.3	-5.1	-6.0	-14.5	-8.7	-9.4	-12.3	-4.5	-3.9	-2.6
Foreign deficit (after grants)	-6.8	-6.4	-5.6	-4.5	-5.6	-6.0	-3.0	3.2	0.9	2.0

Source: IMF staff compilation from information provided by the Ministry of Finance.

1/ Fiscal year, April 1-March 31.
2/ GNP in fiscal years.
3/ Staff estimates.

CHART
ISRAEL
CONSUMER PRICES



Source: Central Bureau of Statistics, *Monthly Bulletin of Statistics*.

[1] Controlled prices (20 percent of the CPI) are prices traditionally fixed directly by the government.

annual basis--the same rate as in the previous four years. As the monthly rate of inflation generally exceeded the depreciation of the sheqel (also, the U.S. dollar appreciated against European currencies), there was a sizeable real appreciation. To be sure, attempts were made to rectify this adverse trend by enlarging the scope of exchange rate insurance and administrative restrictions against imports. This notwithstanding, the outcome was a second year decline in exports and continued growth in imports. This policy also had serious consequences for the capital market and the level of the public's confidence in the ability of the Government to manage the economy, which eventually led to a financial crisis and the aggravation of inflation during the last quarter of 1983.

Realizing that this situation was becoming increasingly untenable, the Government began to retreat from the announced policies by imposing an import deposit requirement in June 1983, and by a 7.5 percent devaluation in August. Since this devaluation was not accompanied by other complementary measures; expectations for further devaluations intensified, purchases of foreign currency increased, and the disposal of bank shares which reached unforeseen proportions making it impossible to continue to support their prices and the stock exchange had to be closed for two weeks in October. In mid-October, a new Finance Minister was installed and he announced a radical change in policy; improvement in the balance of payments became the main objective. Accordingly, the sheqel was devalued by 23 percent, budget subsidies were cut back substantially, and steps were taken to begin reducing other expenditure. At the same time, it was announced that the depreciation of the sheqel would be maintained in line with domestic inflation. As a result, during the last quarter of 1983, inflation accelerated to 16 percent a month (490 percent annually) causing a sharp decline in real income, a weakening of domestic demand, a slow down in economic activity, and a moderate improvement in the balance of payments (Chart 2).

There are many reasons that explain the failure to achieve the objectives set by the authorities over the 1982-83 period, but the most important factor was the inability to reduce domestic demand. It should have been obvious that continuing appreciation of the real effective exchange rate would result in a balance of payments crisis and an increase in subsidy and other transfer payments would result in an unsustainable budgetary deficit. Structural imbalances in the economy reflected by large deficits in the current account of the balance of payments and in government operations are real problems that create expectations; only solving these problems will affect expectations. This is particularly true in Israel because of the institutional rigidities, including the widespread indexation of wages and financial assets.

4. October 1983-June 1985, the period of variable high rates of inflation

a. The acceleration of inflation

The economic policies introduced by the new Government were described as controlled austerity. The aim was to reduce domestic demand and stimulate exports and import substitution. The overriding priority was given to reducing the current account deficit and only secondary importance to reducing inflation; to be achieved through tighter monetary and fiscal policies. The most important immediate task faced by the authorities was to shore up the credibility of the Government and regain public confidence. It was decided to address the problem of reducing inflation only after the initial results of the austerity measures, including cuts in government expenditure, had taken effect. From October 1983 to March 1984 the Government continued to cut subsidies on basic items and devalued the sheqel at a somewhat faster rate than the increase in prices, thus preserving the real devaluation of October. This policy together with the large fall in the public's wealth (the precipitous decline in share prices), and tight credit policies resulted in lower domestic demand and imports. These developments helped to check the acceleration of inflation: it stabilized at a monthly rate of 13 percent during the first quarter of 1984, or over 300 percent at an annual rate (Table 4 and Chart 2).

The decision to hold early elections in July 1984 again induced a change in government policy. Real wages, especially in the public sector, were raised substantially, the increase in prices of subsidized goods was markedly slowed, and domestic demand rose again. The public purchases of foreign currency grew rapidly and expectation for a large devaluation after the elections intensified. In August 1984 the sheqel was devalued, adminstrative restrictions were imposed on imports, and prices of subsidized products were raised. Inflation shot up to almost a 540 percent at annual rate during the third quarter of the year. Similar additional measures introduced by the new "National Unity Government" in September, and inflation reached a record level of 24 percent in October (over 1,200 percent on an annual basis). The fears of entering into a period of hyperinflation prompted the representatives of the Government, Histadrut (labor unions), and employees organizations to sign an agreement with the intention of stabilizing prices, wages, profits and taxes in order to reduce inflationary expectation and inflation. This agreement, known as the first "package deal," was followed by a second and a third package deal, and finally by the economic stabilization program.

b. Package Deal I

Based on previous experience, considerable skepticism was expressed about the potential success of a package deal if other necessary policy adjustments such as cuts in government spending were not implemented beforehand. However, a sense of urgency shared by all social sectors facilitated its introduction and initial success. The workers, industrialists, and political leaders realized that more was to be gained by action than by acquiescing to the further escalation of inflation. This package deal was aimed at achieving a large and rapid drop in the inflation rate in order to calm markets while more fundamental measures were being put in place. Its principal provisions were a general price freeze and cost of living indexation over the three-month period at only two-thirds of the normal compensation for inflation. The Government committed itself not to introduce new taxes or raise existing rates during the period of the freeze; furthermore, increases in rates or fees in the public sector that had already been approved were not to be implemented until the freeze ended. Prices of all imported goods and services were frozen at the November 2, 1984, exchange rate while payments of all import duties and taxes tied to foreign exchange were fixed at that rate. The Government also committed itself to lower the budget deficit, partly through fiscal reforms related principally to the tax system, and to cut income tax payments by 5 percent over the three-month period commencing February 1985.

Because the price freeze did not become effective until November 5, and many prices were hiked in expectation, consumer prices rose strongly in early November (by 19.5 percent). However, from the beginning of November until the end-January 1985, prices rose at a relatively moderate 4.5 percent a month. This sharp cutback in inflation rate was important in calming speculation. Despite this success, it was recognized that the measures were temporary and the program included unsustainable features. The fairly rapid depreciation of the sheqel led to a widening gap between the prices of imported goods and the prices frozen at the exchange rate in force in November 1984. Also, the price freeze on subsidized items increased subsidy payments (US$1.5 billion on annual basis), imposing an unbearable burden on the budget. These distortions and the failure to implement other economic measures announced by the Government, led the parties to negotiate a second package deal, which went into effect at the beginning of February 1985.

c. Package Deals II and III

The second package deal was significantly different in character and substance from the first; it was to apply for an eight-month period, with provision for a review in July if desired by any of the three signing parties. The deal did not provide for a freeze, but for a controlled increase in prices. It permitted immediate increases in prices of nonsubsidized goods by an average of 5 percent, with subsequent monthly rises of between 3 and 5 percent allowed over the period of the agreement. Furthermore, the agreement provided for significant increases in the prices of subsidized goods with immediate products, while prices on other subsidized items were increased substantially. Provision was also made for further price increases in February and March for certain subsidized products, particularly food items. The agreement also provided that workers would forego--for the purpose of calculating wage compensation up to 6 percent of the increase in the cost of living index due to the elimination and reduction of subsidies in the initial stage and a further 1 1/2 percent each for the additional price increases on subsidized goods in February and March. 1/

The new attempt to stabilize inflationary expectations while allowing some price flexibility soon failed and inflation shot up to over 12 percent per month. A controlled rate of price changes seemed harder for the public to grasp than a price freeze, with the former having a decidedly less favorable influence on inflationary expectations. The situation was further complicated by sharp increases in the prices of subsidized goods: in February controlled prices, i.e., prices fixed directly by the Government, were raised by 25 percent, compared with 13.5 percent for the general CPI.

The return to a high rate of inflation in February fueled concerns that the second package deal was not working and led to pressures for a return to more rigid arrangements along the lines of the first package deal. This induced the three signatories to again modify the agreement and adopt a third packed deal, which included a four-month price freeze from April 1, 1985, with provision for a one-step increase in prices at the end of May. The freeze did not apply to prices of subsidized goods and services or to indirect taxes; importantly, the general provisions of the second package deal continued to apply, particularly with respect to wage compensation arrangements. The price increases permitted in the period immediately preceding the April price freeze largely accounted for the further increase in consumer prices of 12.1 percent in March. The rate of inflation in February and March was therefore back to a monthly rate approaching the average over the first half of 1984.

Subsidies were reduced substantially, during the periods of both the second and third package deals. The degree of subsidization prevailing in November 1984 would have cost around US$1.1 billion on an annual basis; by February 1985, after the first package deal, the cost of price subsidization had gone up to US$1.5 billion, but by June 1985 it was back at US$900 million. However, these planned price adjustments and other unplanned increases pushed the consumer prices in April 1985 beyond all projections to 19.4 percent, followed by further increases of 6.8 percent in May and 14.9 percent in June.

In assessing the results of the various package deals one must recognize that although they did not succeed in bringing down price increases, they did allow sharp changes in relative prices, an erosion of wages, stabilization of the real devaluation that was already achieved in the first package deal, and a significant reduction in the rate of subsidies and other expenditure, all of which are necessary conditions for the successful implementation of a stabilization

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1/ The restriction of compensation to only two-thirds of the agreement--applicable in Package Deal I--no longer applied in Package Deal II.

program. Also, the trend for reduction in the civilian deficit of the balance of payments that had started late in 1983 continued during the first half of 1985.

IV. The Economic Stabilization Plan of July 1985

The economic stabilization plan was enacted against the background of the previous package deals, which essentially failed in their objective to stop inflation. The return of monthly inflation rates exceeding 15 percent with expectations building up that economic policy was about to change drastically, and that a new devaluation was to be announced soon resulted in renewed large purchases of foreign currency (about US$700 million in the second quarter of 1985). This more than nullified the improvement in the current accounts and threatened the external liquidity position of the country. Also, the premium on the black market reached a very high level (about 30 percent).

In the fiscal area, notwithstanding that the original central government budget for 1985/86 (April/March) called for a cut in the budget deficit (before grants) of 7 1/2 percentage points of GNP, the deficit remained high during the first half of 1985, although lower than during the first or second halves of the previous year. During the first quarter of the fiscal year (April-June), it became clear that the budget deficit, on an annual basis, was running about US$500-600 million higher than was programmed in the budget. Monetary policy remained accommodative and total bank credit to the private sector expanded by over 300 percent annually (or 2 percent in real terms) during the first half of 1985. Domestic demand and GDP expanded, mainly due to the recovery of private consumption. Based on the adverse developments in all economic and financial areas and the loss of public confidence, it became clear that drastic economic measures were urgently needed, and actually demanded by the general public. The decision of the manufacturer's association to use its option to withdraw from the third package deal agreement prompted the Government to adopt, in early July 1985, a drastic and comprehensive emergency program for economic stabilization without first seeking the consent of the other parties.

1. The overall purpose, objectives, and the underlying assumptions of the program

The aim of the program was to drastically reduce inflation and simultaneously further improve the balance of payments. As previously noted, programs had always concentrated on one of the two targets, usually to the detriment of the other. It was now assumed that the successful containment of both would lay the foundation for subsequent renewed growth and structural changes in the economy. The main objectives of the program were to reduce aggregate demand (and imports) through tight fiscal and monetary policies and to reduce inflation by establishing several synchronized nominal anchors in the area of wages, prices, exchange rates, and credit. Accordingly, the program had four main components: (1) the government budget deficit was to be substantially cut, mainly by reducing subsidies, and the public workforce trimmed; (2) monetary policy was to be restrained and the liquidity of linked financial assets reduced; (3) a sizable devaluation of the sheqel was to be followed by a stable exchange rate against the U.S. dollar; and (4) prices were to be frozen and the COLA mechanism temporarily suspended with immediate effect. The time span of the program was 12 months, the first three of which were declared an economic emergency period.

As was mentioned before, because of the deep-rooted nature of inflationary expectation in Israel and institutional arrangements of widespread indexation, the authorities felt that what they considered traditional stabilization measures were not sufficient to achieve rapid price stabilization. The restrictive monetary and fiscal policy measures were therefore supplemented by freezes of the wage and price levels and of the exchange rate. Thus, the objective was to establish nominal anchors, the most important of which was the exchange rate. Stabilization of the exchange rate was a new element, it had not been included in the earlier package deals. Under equilibrium conditions one monetary anchor would theoretically have sufficed to set all nominal levels. But the Israeli economy was believed to be in a state of disequilibrium and multiple anchors were needed. The quantity of money, it was felt, could not be relied on as an anchor for it was bound to prove unstable during the disinflationary process. Bank credit could not serve as an alternative because the Bank of Israel had only indirect control over its volume. As a result, and because cost factors were presumed to have been an important cause of inflation in the past, the U.S. dollar exchange rate and the nominal wage were selected as the central nominal anchors. Stabilizing the U.S. dollar exchange rate was considered essential for stabilizing inflationary expectations. This rate served as a widely quoted price index which was published daily, while the CPI index was calculated only monthly and published with a two-week delay. To avoid a continued real appreciation, the exchange rate freeze against the U.S. dollar had to be conditional upon a freeze of nominal wage costs (beyond an initial compensation), which justified the temporary suspension of the COLA mechanism.

2. Cuts in budget deficit

The new economic program called for a return to the original budget estimates (a cut of US$1.5 billion, equivalent to about 7.5 percent of GNP, below the level for 1984/85) by immediate implementation of all revenue measures contemplated in the budget and deep cuts in subsidies for basic commodities and services. Further, to compensate for shortfalls in projected revenue and overruns in expenditure, and with the objective of reducing the budget deficit further than originally intended, the Government implemented new temporary tax measures and expenditure cuts amounting to US$750 million on an annual basis (about 3 percent of GNP), or US$560 million for the period July 1985 - March 1986 (almost equally divided between revenue and expenditure). The new revenue measures included a one-year income tax surcharge of 10 percent on the self-employed and corporations. Expenditure cuts consisted mostly of further reductions in subsidies, loans, selected categories of transfer payments, and purchases of goods and services, including wages. Prices of subsidized consumer goods and services and of other goods whose prices are controlled were raised by between 30 percent and 100 percent immediately and the amounts spent on subsidies were frozen in real terms. A decision was made to dismiss about 10,000 workers from the public sector. The program was supported by US$1.5 billion in emergency assistance from the United States, half of which was disbursed in 1985.

3. Monetary policy

The stabilization plan was based on restrictive fiscal policy and initial wage erosion, with the impact of the fiscal action expected to be felt only gradually. Although a price freeze was imposed, the authorities considered that only a very restrictive monetary policy would act to immediately reduce domestic demand and support price stability. The success of the program essentially rested on a sharp turnabout in inflationary expectations. Therefore, monetary policy stance was very tight in the early phase of the program with some relaxation of the policy considered possible only after fiscal action began to have its effect. Accordingly, the program called for bank credit outstanding to be cut by 10 percent in real term in July and then kept at broadly the same level in nominal term through October. As almost one half of the outstanding credit was destinated for exports--there was no intention to cut this credit--the brunt of the cut fell on domestic free credit, with the correspondent implication for demand and production. Implementation of this policy was to be achieved by very high real rates of interest; a lowering nominal interest rates would be permitted only after a firm downward trend in the inflation rate had been observed and inflationary expectations had been changed. This policy was reinforced by lowering of the ceiling on foreign currency lending (ceilings apply to all foreign currency lending by the bank), aimed at discouraging capital inflows attracted by the large margin between domestic and foreign interest rates.

On the financial saving side, the government policy was to encourage the use of the capital market for financing private investments and to preserve the stability of long-term saving instruments. Therefore, although the indexation of long-term financial assets was maintained, its scope was narrowed for foreign-exchange-linked deposits (PATAM) by prohibiting deposits of less than one-year. Also, it was announced that the Government would gradually increase the share of tradeable bonds and use more open market operations.

4. Exchange rate and external sector

On July 1, 1985, the sheqel was devalued by 16 percent in terms of foreign currency. The rate was fixed at NIS 1.5 per U.S. dollar. In conjunction with the devaluation of the sheqel, the authorities eliminated the requirement for a non-interest-bearing deposit of 15 percent for one year on a range of imports. The export subsidy on direct credits was eliminated by requiring such credits to be denominated henceforth entirely in U.S. dollars; these export credits would be charged as interest rate equivalent to 2 percentage points above LIBOR. Together with the cut in the import deposit requirement, the measure was viewed as a step towards a unification of the effective exchange rate. Finally, the exchange rate insurance scheme was modified from a guarantee of export profitability to Europe, to a commitment to pay all exporters up to 11 percent of their value added in exports. 1/ This new scheme was aimed at eliminating distortion and reducing the substantial costs to the budget.

The fixing of the exchange rate at NIS 1.5 per U.S. dollar was made conditional upon the freezing of nominal wages and the profitability of export. Indeed, one of the key factors in the economic plan was to keep an accepted level of profitability in exports. This policy implied that in the absence of changes in export subsidies, terms of trade and relation between foreign currencies, the trend in nominal wages will be the major factor determining the exchange rate.

5. Wages and prices

As mentioned earlier, the program included a three-month freeze on prices, nominal wages, and the exchange rate; this was subsequently extended for six months. Prior to the price freeze, a one-time adjustment was carried out at the beginning of July: prices of subsidized goods and services and of other goods whose prices are traditionally fixed directly by the Government were raised between 30 percent and 100 percent (50 percent on average); other prices were allowed to increase by up to 17 percent with special permission. These and other adjustments produced a jump of 27.5 percent in the price level in July and some spillover in August (See Chart 2). It was announced that starting in January 1986, the Government would gradually dismantle the price controls, starting with goods and services that only marginally influence the CPI. Taking into considerationthe above mentioned measures' impact on new prices, and the resulting erosion of real wages due to the temporary suspension of the cost of living adjustment mechanism (COLA), the Government approved a one-time 14 percent payment to wage earners. The Government obtained the necessary emergency authorization from the Knesset to enforce the COLA suspension, but did not need to invoke this power: the new private sector wage agreement signed by the Histadrut and the manufacturers' association in mid-July included, inter alia, a suspension of the COLA mechanism for three-months and took into account of the 14 percent wage adjustment in July. This agreement, which expired on March 31, 1986,

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1/ The original insurance scheme centered on a formula calculating the sheqel appreciation vis-à-vis European currencies.

provided for a one-time lump-sum payment equivalent to 12 percent of July's wage, paid in early September (not considered part of wages and therefore not part of the base for future increases). Furthermore, the agreement called for a cumulative wage supplement of 12 percent to be paid in three installments: 4 percent in December 1985, 4 percent in January 1986, and 3.5 percent in February 1986. These wage increases were to be absorbed by the employers who committed themselves not to increase product prices. Also, the agreement stipulated that the COLA mechanism would be reinstituted after October, and that the degree of indexation would be enhanced; henceforth an adjustment amounting to 80 percent would be paid when the cumulative increase in the CPI reached 4 percent or after an interval of three months, whichever came earlier. Previously, the COLA was paid only when the cumulative CPI increase exceeded 12 percent or after 6 months; however, the new COLA agreement signed in May 1986 stipulated that the cumulative threshold for COLA payments be raised to 7 percent and only with a 70 percent adjustment.

V. Developments Since the Introduction of the Program

Until now, the achievements of the economic stabilization program have indeed been impressive. The problems of inflation and the balance of payments have evolved satisfactorily. Inflation is running at about 20 percent at an annual rate over the 12-month period ending in December 1986, compared with almost 400 percent inflation just before the introduction of the plan. Also, there are no signs of artificial distortion in relative prices. Speculative purchases of foreign exchange stopped and the public has sold foreign exchange to the Bank of Israel. The current account deficit has shifted to a surplus, the Bank of Israel accumulated international reserves and the net external debt of the country was reduced. These improvements were aided by a drop in public consumption, a sharp reduction in oil import bill, improvement in the terms of trade, an apparent stabilization of the exchange rate, and the return of public confidence.

The costs of the economic and financial improvements have been relatively mild. Domestic production after falling by about 5 percent during the second half of 1985 has rebounded in the first half of 1986 and the unemployment rate after rising by 1.5 percentage points in early 1986 has declined by the same amount during the last quarter. However, notwithstanding the great successes achieved so far, some trends that started during the first quarter of 1986 cast some shadows on future developments. The most disturbing development is the strong resurgence of private sector demand, following a long period of relative restraint. This increase in demand has been reflected in higher imports, particularly durable goods, and widening trade deficit as performance of exports has been somewhat less buoyant than was expected. If these trends are to continue, the stability of the exchange rate may be brought into question.

1. Real economic activity and the balance of trade

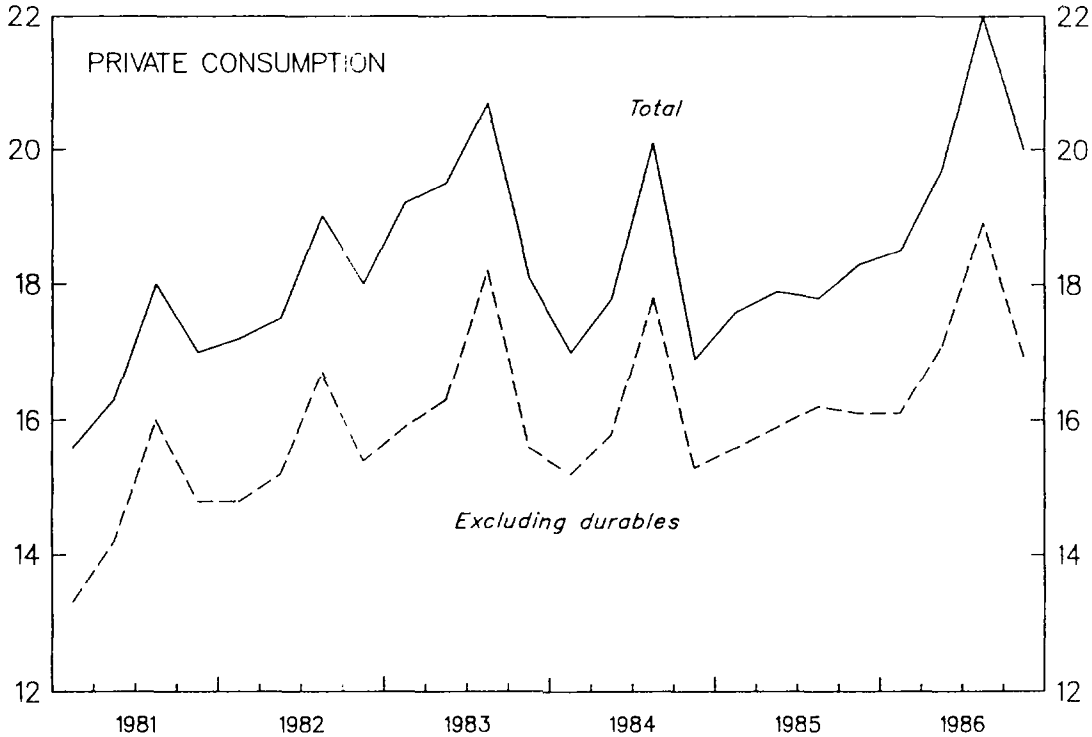
Developments in economic activity and in the balance of trade during the first 18 months of the program are divided into two different periods--the second half of 1985 and most of 1986--with substantially different results. During the first few months, local demand contracted, both in the public and private sectors, and the balance of trade improved strongly. Economic activity and employment declined, while unemployment increased by 1 percent up to 7.5 percent. The decline in activity was manifested especially in the business sector because of lower demand by the private sector and reduced purchases of the Central Government. Investment also decreased markedly during this period, with a very large reduction in stocks. These trends changed gradually during the second quarter; private consumption and investment (entirely in stocks) increased, unemployment declined to 6.7 percent and the balance of trade deficit remained stable. However, the response in economic activity lagged behind. Developments during 1986 indicate that these trends had intensified. Despite the public sector's continuing decrease in demand, total domestic demand for consumption has risen strongly (Chart 3). However, this increase in demand has been mostly directed to imports. Although domestic activity has been risen moderately, the level of unemployment after reaching almost 8 percent during the second quarter of 1986, has declined steadily to 6.5 percent by the end of the year (Chart 4).

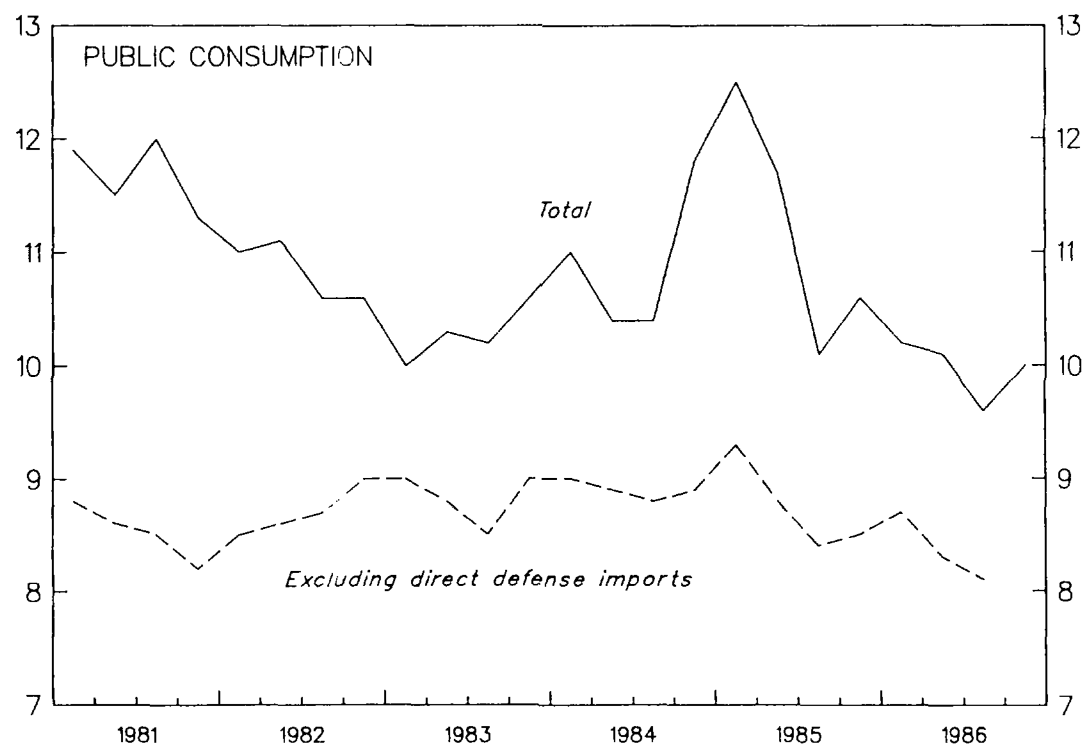
The increase in domestic demand and the moderate recovery in economic activity has been reflected in the balance of trade. The overall trade deficit rose to US$193 million monthly in the first half of 1986 and US$210 million in the second half, compared with US$153 million monthly in the second half of 1985. During 1986, exports receipts rose by 15 percent while the import bill increased by 16 percent, resulting in a 20 percent increase in the trade balance deficit. It is important to note that during this period consumer goods imports rose by over 60 percent. However, although the changes may be somewhat alarming, unilateral transfers more than covered the deficits in trade and services and the current account still registered a surplus of almost US$1.4 billion.

2. Prices, wages and the exchange rate

There is no doubt that the most impressive success of the program has been the almost immediate sharp reduction in prices without creating relative price distortion in the economy. This has been achieved despite the gradual recovery in the level of wages to pre-program levels and the continuation of the sheqel's depreciation against the European currencies and the basket of currencies. Also, since January 1986, price controls have been gradually dismantled and now cover only about 40 percent of the CPI. Finally, enough confidence in the sustainability of lower prices returned to allow the Government to continue to cut subsidies and raise prices of basic goods and services as planned in the 1986/87 budget. During the period since the introduction of the plan

CHART 3
ISRAEL
CONSUMPTION
(In billions of new sheqalim at 1980 prices, seasonally adjusted)





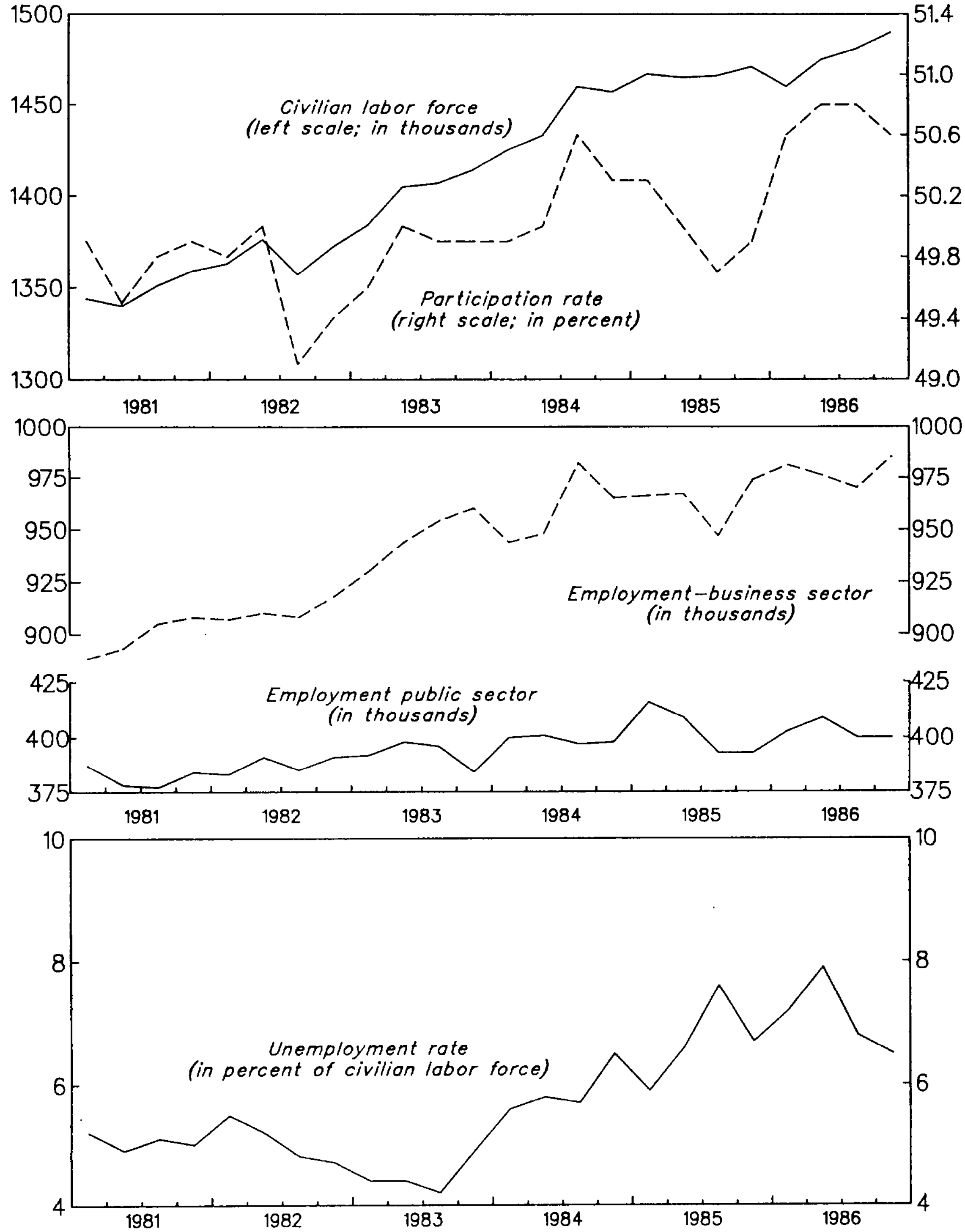
Source: Central Bureau of Statistics, *Monthly Bulletin of Statistics*.

CHART

ISRAEL

LABOR MARKET INDICATORS, 1981–86

(Seasonally adjusted)



Source: Central Bureau of Statistics, *Monthly Bulletin of Statistics*.

(excluding July when a corrective price jump took place), the monthly price increases averaged less than 2 percent compared with an average of over 15 percent monthly during the year preceding the program.

Wage erosion already started in early 1985 within the package deal scheme. However, the large decline in real wages came during the third quarter of 1985 when they fell by almost 15 percent compared with the previous quarter and they were almost 13 percent below the average of 1984 (See Table 4 and Chart 5). This decline was more pronounced in the public than in the business sector. Although starting to recover during the last quarter of 1985, real wages still remained very depressed. However, erosion of net wages during 1985 was about 5 percent less than gross wages because the Government granted a form of tax relief by continuing the 100 percent CPI indexation of the income tax brackets, which lowered the average rate of taxation. Persons who do not pay income tax because their earnings are lower than the minimum level were exonerated for paying their contribution to the social security fund (5.3 percent). Wages started to rise markedly during the first quarter of 1986 when gross real wages in the business sector recovered to the pre-program level at the end of the quarter; in the public sector this level was reached in the end of the second quarter. On an annual average, real wages per employee post are estimated to have risen by about 12 percent in 1986.

Although the fixing of the exchange rate at NIS 1.5 per U.S. dollar was never announced as an integral part of the program, it has been kept at this level until January 1987. However, it was announced that adjustment of the exchange rate would depend on development in nominal wages, and they rose substantially during the first half of 1986 while the U.S. dollar exchange rate still remained fixed. The explanation is, of course, that the dollar depreciated strongly against the basket of currencies used in Israeli calculations of an effective exchange rate and there was no need to change the sheqel U.S. dollar exchange rate despite the nominal increase in wages. Also, some of the higher labor costs resulting from increase in nominal wages were compensated for by a reduction in the employers' contribution to the social security system (NII). In late July 1986 the authorities announced that from August 1, the NIS will be linked to a basket of currencies closely reflecting the composition of the country's foreign trade. The authorities felt that the virtual freeze in the sheqel value against the U.S. dollar for 13 months served its purpose and it was time to move into the second stage of the program. In spite of the unchanged nominal exchange rate relative to the U.S. dollar and the higher inflation rate in Israel than in its trading partners, the real effective exchange rate (against the basket of currencies) remained stable during the last 18 months. However, the profitability of exports deteriorated substantially during the second half of 1986 and on January 13, 1987 the new Israeli shequel was devalued by 9 percent against the basket of currencies. As a part of this devaluation an agreement was reached between the Government, the labor unions, and the

Table 4. Israel: Selected Economic Indicators, Quarterly 1982-1986

(Percentage changes, unless otherwise indicated)

	1982				1983				1984				1985				1986				1987 prel
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I
Prices (quarterly on annual basis)	109	141	158	120	118	135	137	487	311	496	536	565	222	361	247	29	7.5	29.6	12.6	30.0	19.3
GDP (seasonally adjusted data, at 1980 prices)	0.8	-2.2	0.7	4.4	0.6	-1.4	-0.1	0.8	-0.6	-0.8	6.0	-1.0	2.5	1.3	-2.1	-5.7	5.7	1.1	-2.2	1.2 1/	...
Unemployment (during quarter)	5.3	5.1	4.9	-4.7	4.5	4.4	4.2	5.0	5.6	5.8	5.7	6.5	5.9	6.5	7.5	6.7	7.2	7.9	6.8	6.5 1/	5.7
Real wages (compared with previous quarter)	5.0	-3.0	--	1.0	15.0	-8.0	-5.6	-14.8	4.4	8.9	3.5	-8.5	4.2	-4.9	-14.6	-1.1	13.9	4.9	0.6	--	...
Money and credit (compared with end of previous quarter)																					
M1	42	3.3	25	15	44	2.1	16	36	39	34	44	69	52	21	60	21	55	2.7	22	9.3	-4.5
M2	55	37	6.7	27	33	16	13	42	71	29	53	58	64	34	112	24	18	-1.9	24	19	13
M3	28	27	24	20	26	27	35	66	51	52	60	60	44	40	25	5.8	7.1	-3.0	10	10	10
M4	22	29	22	20	3.1	27	29	57	47	48	58	61	41	46	25	12	14	3.5	9.8	12	18
M5	22	27	30	28	32	25	26	27	55	46	63	70	38	47	31	6.2	12	2.4	6.0	11	15
Credit	21	18	26	29	12	16	27	45	41	51	75	63	35	48	29	5.1	9.1	7.5	12	11	13
Balance of payments (in billons of US$)																					
Trade balance	-0.2	-0.8	-1.1	-0.1	-0.6	-0.9	-1.0	-0.7	-0.6	-0.7	-0.8	-0.5	-0.6	-0.8	-0.5	-0.5	-0.4	-0.6	-0.5	-0.5	-0.8
Balance on goods and services	-1.2	-1.3	-1.4	-0.9	-1.1	-1.3	-1.6	-1.0	-1.1	-1.1	-1.5	-1.1	-1.1	-1.1	-0.9	-0.9	-0.9	-1.0	-1.2	0.9	...
Unrequited transfer	0.9	0.6	0.3	0.9	0.5	0.5	0.4	1.4	0.5	0.4	0.5	2.0	0.8	0.8	1.5	2.1	0.9	1.2	1.2	2.1	...
Current account	-0.2	-0.7	-1.1	-0.1	-0.6	-0.8	-1.2	0.4	-0.6	-0.7	-1.0	0.9	-0.3	-0.3	0.6	1.2	--	0.2	--	1.2	...

Sources: Central Bureau of Statistics; and Bank of Israel.

1/ Estimated.

CHART 5
ISRAEL
WAGE DEVELOPMENTS

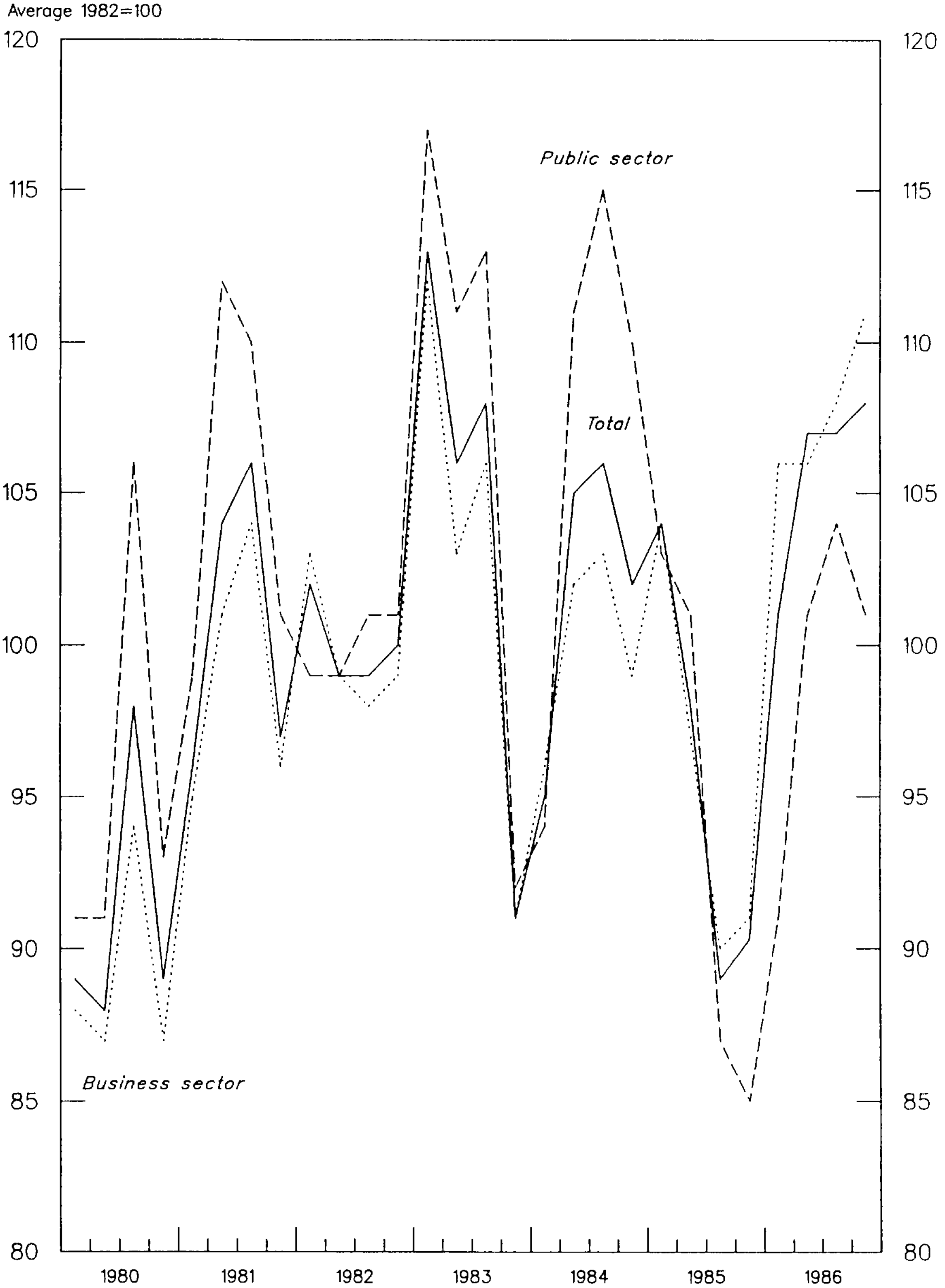
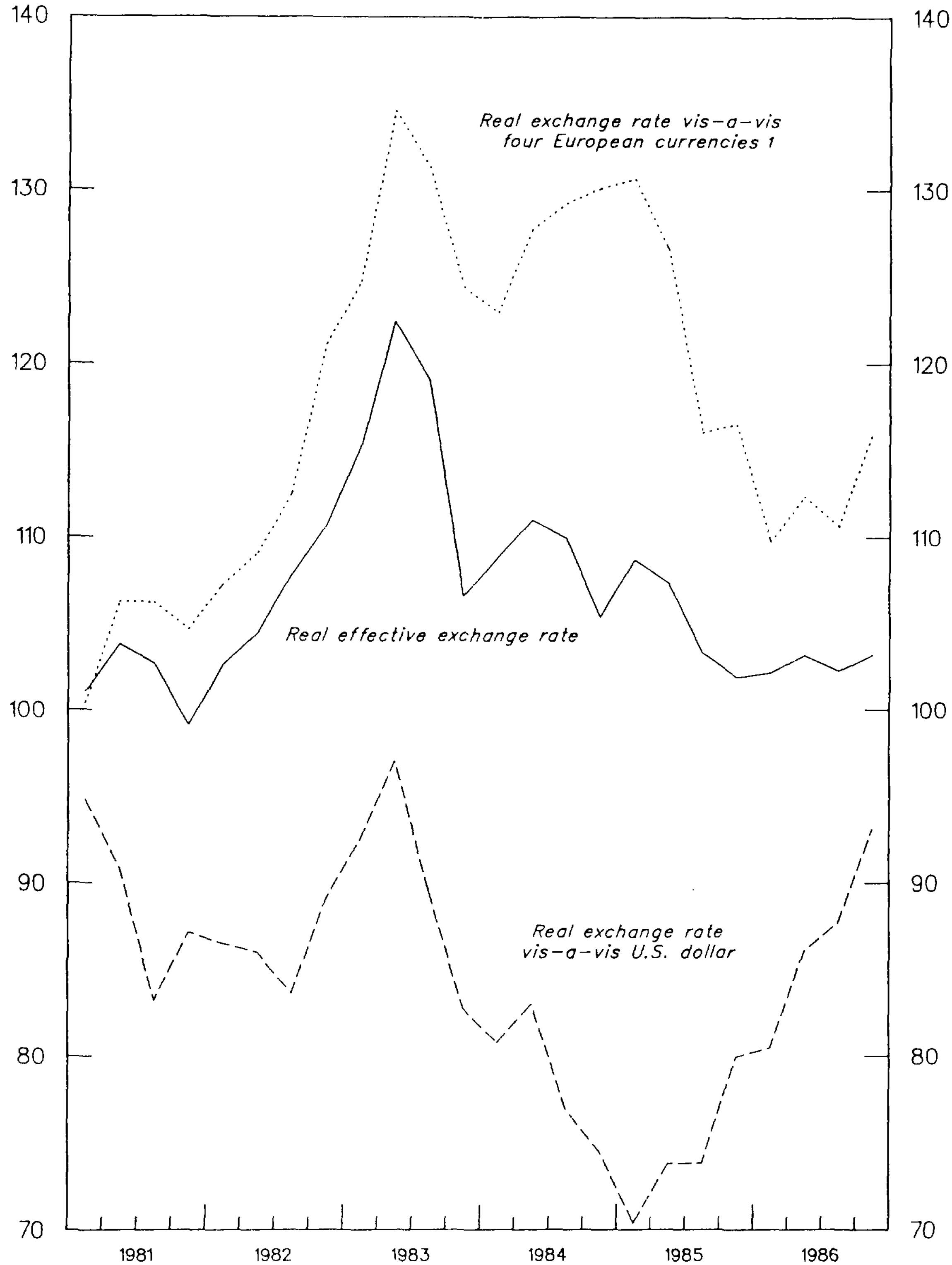


CHART 6

ISRAEL

REAL EXCHANGE RATES FOR THE NEW SHEQEL, 1981–86

(Average, 1980=100)



Source: Standard developed in connection with the Fund's Information Notice System (based on consumer prices).

[1] Pound sterling, Deutsche marks, French francs, and Netherlands guilders.

Note: An increase in the index indicates and appreciation.

employees to postpone part of the cost of living adjustment for wages to next year (Chart 6).

3. Fiscal and monetary developments

The overall fiscal performance improved substantially in 1985/86 compared with the outturn in previous years, the budget estimates, and with the program targets. Although the improvement already started during the first quarter of the fiscal year (April-June), most of the gains were made after the introduction of the program. The budget deficit, before grants, is estimated to has been cut by 8 percentage points of GNP to 21 percent. This was entirely due to an increase in revenue (see Table 3). The increase in revenue reflected the positive impact of decelerating inflation on tax collections, the elimination of various tax benefits previously employed by corporations, and other measures introduced in the budget at mid-year. Although some expenditure cuts occurred through reductions in subsidies and lower wages and salaries, increased payments for interest and defense outlays kept expenditure from declining. Because of a large increase in foreign grants, the overall financing requirement were reduced by 14 percentage points of GNP and the Government, for the first time in many years, was able to repay some of its debt to the Bank of Israel and reduce its external debt concomitantly (See Chart 1).

Based on preliminary estimates for the fiscal year 1986/87, it seems that because of cuts in subsidies and defense expenditure abroad, and additional increase in revenues,the budget deficit has been reduced further by almost 4 percentage points of GNP. The continued large amount of foreign grants (although lower than last year) has been sufficient to cover the budget deficit and eliminate any need for net financing.

The program objectives for monetary policy were met with considerable success during the second half of 1985, undoubtedly helped by the strong improvement in government financing. Although the restrictive policies have resulted in very high real interest rates throughout the period and in the first quarter of 1986, they largely reflected the long entrenched inflationary expectation in Israel and the public's desire to see changes in the basic real economic trends before regaining confidence in government policies.

The following is a summary of monetary developments over the second half of 1985: (1) the freezing of the exchange rate relative to the U.S. dollar and the restriction on new deposits in PATAM as well as the high interest rates on sheqel nonindexed deposits led to a massive switch from indexed to nonindexed shorter term assets. As reserve requirements on PATAM were 100 percent, this switch increased the potential for a strong monetary expansion. Accordingly, the Bank of Israel increased sharply the reserve requirements against all sheqel deposits. Overall, although total liquid financial assets decreased slightly (3 percent) during the second half of 1985, money supply and short-term time deposits (M2) increased by over 80 percent during this period; (2) total bank credit to the private sector, after declining by about 10 percent in real term during the third quarter, recovered somewhat in the last quarter of 1985, but in December was still 5 percent below the end-June 1985 level; (3) the result of the tight monetary policy was reflected in the high real marginal cost of domestic credit.

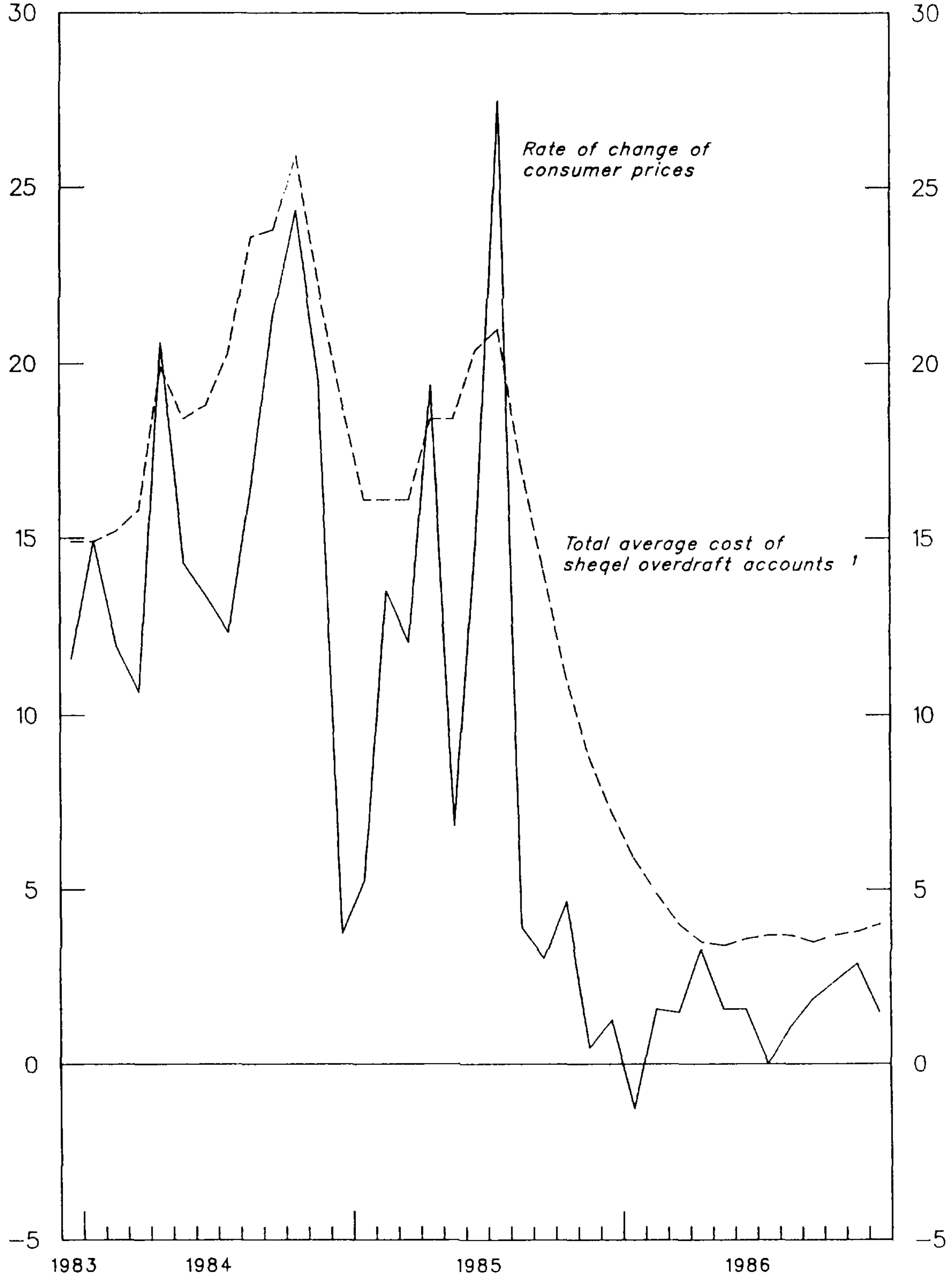
The average monthly interest rate of sheqel overdraft credit averaged about 17.5 percent during the first half of 1985, but dropped in various steps, following the introduction of the program, to around 6 percent by year-end (Chart 7). However, because of the sharp drop in the inflation rate, the average cost of sheqel overdraft credit was extremely high in real terms over the second half of 1986 (real interest rate fluctuated between 60 and 100 percent on an annual basis).

Developments in the public's holdings of financial assets in the first half of 1986 were to a large extent the continuation from the second half of 1985 but substantially changed in the second half. For the year as a whole, total financial liabilities of the banking system to the private sector increased by abour 5 percent while a significant change occurred in their composition (Chart 8). The money supply continued to grow rapidly (78 percent in real terms), other deposits in local currency increased by 33 percent, and deposits on foreign currency declined by 19 percent. Total real credit to the public expanded by almost 22 percent during the year. However, while direct credit was cut even in nominal terms, the increase in nondirected credit (free credit) amounted to 67 percent. The real interest rate, although still high, fell rapidly over this period. To check somewhat the rapid expansion in short-term free credit (including consumer-borrowing surge), the Bank of Israel raised interest rates on its monetary loans in early October 1986 and again in January 1987. Real interest rates on short-term deposits after turning negative in mid-year have risen somewhat in recent months.

VI. Preliminary Conclusions and Prospects for the Near Future

Although thus far successful in meeting both major objectives of the economic stabilization program, improvement in the balance of payments and a drastic reduction of inflation to less than 2 percent a month, the major task now facing the Israeli authorities is to consolidate these achievements, move to the next phase of a lower inflation rate comparable to the OECD level, and resume a sustained economic growth. Many of the basic factors responsible for the imbalances in the economy, although being temporarily suppressed still exist and may undo many of the successes (Chart 9). Only structual reforms and changes in long held practices would guarantee the attainment of the objectives. The immediate danger is to rest on the results achieved so far and fall into complacency.

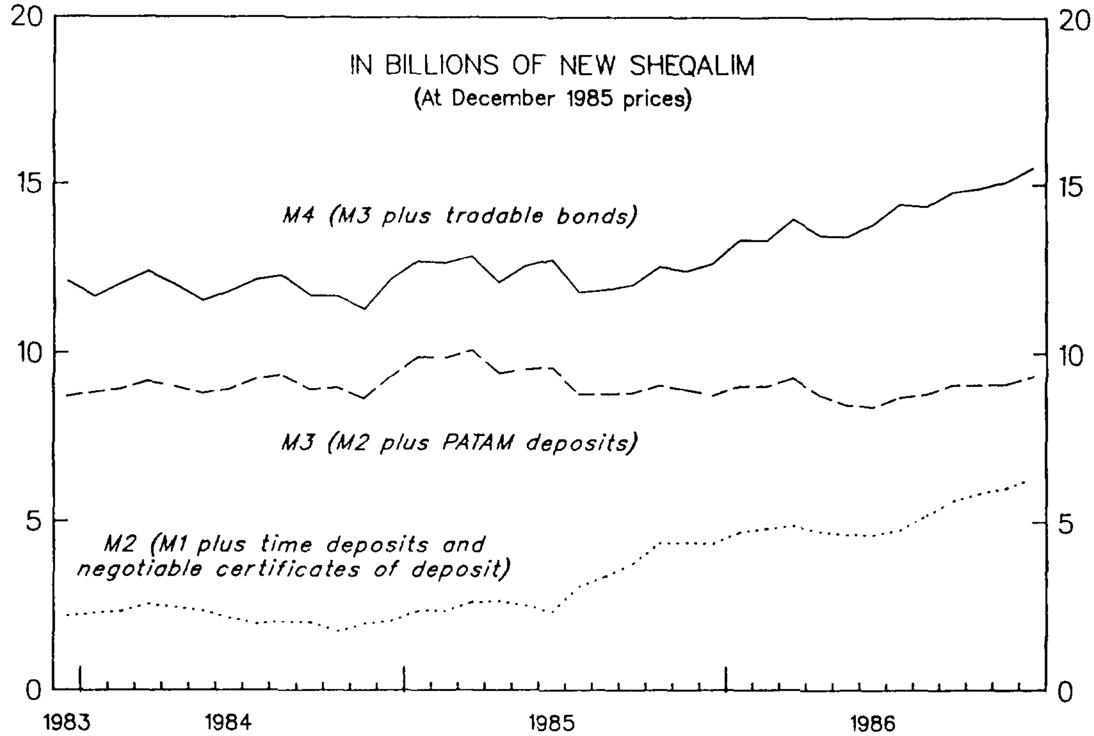
CHART 7
ISRAEL
SHEQEL OVERDRAFT RATE AND
CONSUMER PRICES, 1983-86
(In percent per month)

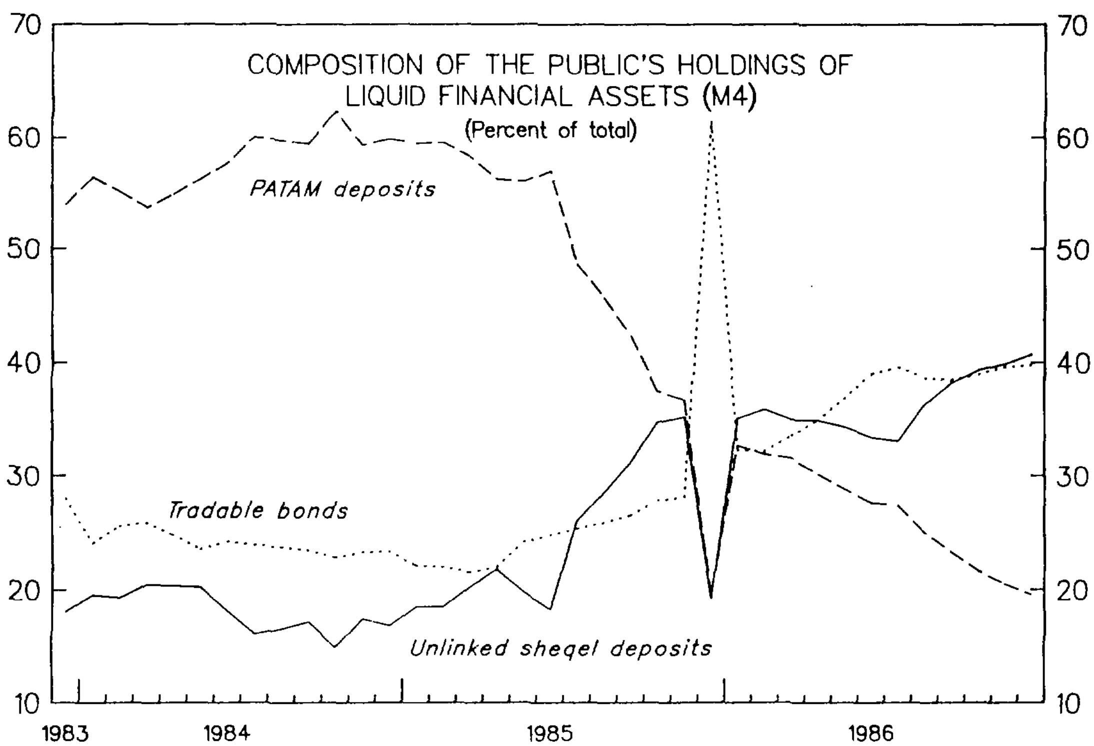


Sources: Bank of Israel, Research Department, *Recent Economic Developments;* and data provided by the Bank of Israel.

[1] Includes allocation fee and risk premium.

CHART 8
ISRAEL
LIQUID FINANCIAL ASSETS OF THE PUBLIC





Sources: Bank of Israel, Research Department, *Recent Economic Developments;* and data provided by the Bank of Israel.

The Central Government still plays a predominant role in total economic and financial activities in Israel. The extensive system of government regulations and high taxes that reduce economic efficiency and adversely affect economic growth has not been changed much since the introduction of the economic plan. Although the personal income tax burden has been reduced somewhat recently, the rates are still very high resulting in a disincentive to work and a large gap between net salary and employers' labor costs. In many areas, the Government controls both the level of production and prices. Because of the government's high domestic borrowing requirements, the entry of the private sector into the capital market is restricted and subject to approval. Hopefully, the on-going studies by the financial authorities to reform the capital market and open it up to private borrowers will be announced and implemented soon.

The widespread indexation system has been altered only marginally. The same COLA clauses for wages and pensions that existed before continue to apply with no minimum time restrictions. Time and saving deposits, both in local and foreign currency, for more than one year are still fully indexed. Real interest rates on short-term local currency deposits have become negative and the shift from linked to unlinked liquid financial assets has been slowed down. The bulk of linked assets is concentrated in long-term saving schemes and government index-linked bonds where interest rates are positive.

The level of real wage surpassed the pre-program level, which is considered to be much too high in view of the large real increases in wages registered during the late 1970s and early 1980s but with almost no compensating productivity gains during this period. Keeping this high real wage may result in higher unemployment or renewed inflationary pressures. Demand for higher wages is most likely to result in a further devaluation and the end of exchange rate stability.

The improvement in the budget, although impressive, is still fragile and the cuts have been implemented not in the most desirable way. Most of the gains have come from higher taxes (taxes amount to almost 50 percent of GNP for the central government budget plus about a 10 percent contribution to social security) and reduction in subsidies and transfer payments. The public sector real claims on resources (purchase of goods and services) has been reduced only moderately. Although the 1987/88 budget presented to the Knesset is based on further reduction in the budget deficit (before foreign grants) of almost 2 percent of GNP, the financing requirement (after foreign grants)is estimated to increase by 3 1/2 percent of GNP because of the sharp decline in foreign grants compared with the last two years. Also, the scheduled maturing of internal debt is particularly heavy in 1987/88, including the equivalent of about US$1.3 billion repayments in the first stage of the bank shares arrangement. The fiscal problem for the coming years is to make cuts in expenditure large enough not only to reduce the deficit but also to allow a reduction in taxes and more access to the capital market by the private sector.

Developments in recent months point to the dangers that lie ahead. The recent surge in private demand together with the widening deficits in the balance of trade reflect the recovery in wages and decline in private savings. Also, the large expansion in real credit registered over the year aided these developments. The recent increases in discount rate are in the right direction but may not be enough. The stability of the exchange rate in relation to the basket of currencies proved to be most important in building confidence and reducing inflationary expectation. However, in view of the continued increases in nominal wages, and developments in the balance of payments over the last twelve months, the competitiveness of the country's exports would come into question and renewed speculation for an imminent devaluation may rekindle inflationary pressures. Nevertheless, if the authorities can be successful in further cutting government expenditure, keep wage moderation, and reduce substantially credit expansion, it would be possible to maintain the achievements of the program and resume a sustainable satisfactory rate of economic growth in the near future.

CHART

ISRAEL

SELECTED ECONOMIC DATA

(Quarterly rates of growth in percent)