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<u>INFORMATION</u>

December 10, 1993

To: Members of the Executive Board

From: The Secretary

Subject: <u>South Africa - Selected Economic Issues</u>

        This paper provides background information to the staff report on
the 1993 Article IV consultation discussions with South Africa and its
request for a purchase under the compensatory and contingency financing
facility, which was circulated as EBS/93/192 on December 1, 1993.

        Mr. Rozwadowski (ext. 37862) or Mr. Gordon (ext. 38663) is
available to answer technical or factual questions relating to this paper
prior to the Board discussion.

        Unless the Documents Preparation Section (ext. 36760) is otherwise
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approved by the Executive Board and with the appropriate deletions, to the
GATT Secretariat, following its consideration by the Executive Board.

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INTERNATIONAL MONETARY FUND

South Africa

Selected Economic Issues

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Approved by the African Department

December 7, 1993

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1/ The paper also reflects contributions by Mr. D. Orsmond (AFR), and by
Mr. J. Garner who contributed as a summer intern.

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South Africa--Basic Data

Area and population

Area	1.22 million square kilometers
Population (1992)	38.9 million
Population growth rate (1992)	2.20 percent
Employment in nonagricultural	
sector (September 1990)	5.0 million

IMF position (September 30, 1993)

Quota	SDR 1365.4 million
Fund holdings of rand (in percent of quota)	100
Holdings of SDRs (in millions)	4.2
Exchange rate	R 1 = US$ 0.2912

National Accounts	1992	1988	1989	1990	1991	1992
	In millions of rand at current prices		(Percentage change in real terms)			
Private consumption	203,407	5.3	2.8	2.1	0.3	-2.3
Public consumption	69,727	1.7	3.7	2.6	5.2	0.3
Gross fixed investment	52,060	8.9	5.1	-2.0	-8.4	-9.9
Total domestic demand 1/	322,397	6.9	2.1	-1.5	-0.2	-2.2
Exports	78,070	9.8	4.6	1.9	0.3	1.0
Imports	65,285	21.9	-0.2	-5.8	2.1	5.4
Gross domestic product	327,068	4.2	2.3	-0.5	-0.4	-2.1

Central government finances 2/		(In millions of rand)				
Revenue		48,672	64,096	67,122	73,106	76,901
Expenditure		55,927	65,459	73,947	85,861	103,770
Balance		-7,255	-1,364	-6,826	-12,755	-26,870
(in percent of GDP)		-3.5	-0.6	-2.5	-4.2	-8.1

Balance of payments		(In millions of U.S. dollars)				
Non gold exports		14,136	14,638	16,515	16,194	17,187
Gold exports		8,669	7,299	7,024	7,094	6,437
Merchandise imports		17,340	16,881	16,775	17,163	18,194
Services and transfers, net		-3,976	-3,734	-4,707	-3,884	-4,048
Current account balance		1,489	1,322	2,057	2,241	1,382
Net long-term capital		-516	-231	-39	-627	-530
Net short-term capital (including errors and omissions)		-2,504	-1,563	-892	-1,103	-1,649
Net capital 3/		-3,020	-1,794	-931	-1,730	-2,178
Overall balance 4/		-1,531	-472	1,126	511	-797
Official reserves						
(year end; in millions of dollars)		2,075	2,097	2,422	2,973	2,984
(in months of imports)		1.3	1.2	1.4	1.7	1.7

Monetary aggregates		(In percentage change over previous period)				
Broad money (M3), year end		27.2	22.6	12.2	12.5	8.0

Prices and wages						
Consumer prices, year average		12.9	14.7	14.3	15.3	13.9
Remuneration per worker, year average (in nonagricultural sector)		15.3	18.0	16.9	15.8	15.2

Sources: South African Reserve Bank, Quarterly Bulletin; and International Monetary Fund, International Financial Statistics; data provided by the South African authorities; and staff calculations.

1/ Excludes statistical discrepancy.
2/ Department of Finance data. Fiscal year begins April 1. Figures are for total revenue.
3/ Excluding short-term liabilities relating to reserves.
4/ Net of reserve-related liabilities, SDR allocations, and valuation adjustments.

I. Recent Economic Developments

South Africa is crossing its major political watersheds, the abandon-
ment of apartheid and the adoption of majority rule, at a juncture when
economic conditions are more depressed than at any time since the 1930s. By
the fourth quarter of 1992, when the current depression appeared to have
bottomed out, real GDP had shrunk for three successive years, real income
per capita was 15 percent lower than in the early 1980s, and an estimated
45 percent of the labor force was unable to find employment in the formal
sector.

The 1989-93 recession took place in the context of a long-term secular
decline in growth: from 5-6 percent a year on average during the 1960s and
3-3½ percent a year during the 1970s to 1½ percent a year in the 1980s
(Table 1; Chart 1). Growth during the 1980s was not enough to absorb a
labor force growing at 2.7 percent per year or to raise real per capita
income. Both domestic and external factors contributed to the slowdown.
Successive waves of political unrest and rising uncertainty about future
political and economic policies brought gross fixed investment down from
26 percent of GDP on average during 1970-85 to 16 percent in 1992, a level
barely sufficient to cover depreciation. The external environment became
increasingly hostile: trade sanctions reduced firms' access to
international markets and their exposure to international competition;
financial sanctions, imposed in August 1985, prevented South Africa from
rolling over short-term debts, forcing the country to switch from being a
net borrower to being a net lender on international credit markets; and the
terms of trade worsened progressively. Partly in response, South Africa
adopted an inward-looking development strategy with higher protective
barriers and increased incentives for capital-intensive industries. In
1992, the third year of the recession, conditions were exacerbated by a
severe drought which reduced agricultural production by 25 percent.

The remaining sections of this chapter provide a summary of develop-
ments during the course of the recession and highlight the importance of key
problems that are developed further in the subsequent chapters: labor
market rigidity, insufficient investment and saving; and pressures on the
budget that threaten fiscal sustainability.

1. Real sector developments

In its first phase, lasting from 1989-91, the current recession was
associated with a sharp reduction in demand, particularly investment demand
(Appendix Tables 1 and 2). In 1989, real growth slowed to 2.3 percent from
4.2 percent in the previous year. The deceleration was attributable
entirely to a falloff in domestic demand; in fact there was a substantial
positive influence from the turnaround of net exports. During the next two
years GDP shrank by 0.5 percent a year owing to inventory destocking during
1990 and an increasingly rapid decline in fixed investment in 1990 and 1991.
The influence of the external balance was mixed: in 1990 imports fell
sharply while exports continued to rise, resulting in a net positive impulse

Table 1. South Africa: Selected Economic Data, 1988-93

	1992 (In millions of rand at current prices)	1988	1989	1990	1991	1992	1993 Official project-ions
			(Percentage change at constant prices)				
National accounts							
Private consumption	203,407	5.3	2.8	2.1	0.3	-2.3	--
Public consumption	69,727	1.7	3.7	2.6	5.2	0.3	-0.5
Gross fixed investment	52,060	8.9	5.1	-2.0	-8.4	-9.9	-3.0
Total domestic demand 1/	322,397	6.9	2.1	-1.5	-0.2	-2.2	0.5
Exports of goods and nonfactor services	78,070	9.8	4.6	1.9	0.3	1.0	2.0
Imports of goods and nonfactor services	65,285	21.9	-0.2	-5.8	2.1	5.4	1.0
Gross domestic product	327,068	4.2	2.3	-0.5	-0.4	-2.1	0.5
			(Percentage change)				
Prices, wages, and employment							
Consumer prices		12.9	14.7	14.3	15.3	13.9	10.0
Consumer prices (end of period)		12.4	15.6	14.4	16.0	9.5	...
GDP deflator		15.5	15.2	13.7	13.2	12.1	10.0
Remuneration per worker 2/		15.3	18.0	16.9	15.8	15.2	...
			(In billions of U.S. dollars)				
Balance of payments							
Merchandise exports		14.1	14.6	16.5	16.2	17.2	16.9
Gold exports		8.7	7.3	7.0	7.1	6.4	6.8
Merchandise imports		17.3	16.9	16.8	17.2	18.2	18.3
Services and transfers, net		-4.0	-3.7	-4.7	-3.9	-4.0	-3.8
Current account balance		1.5	1.3	2.1	2.2	1.4	1.8
(In billions of rand)		3.4	3.5	5.3	6.2	3.9	5.7
(In percent of GDP)		1.7	1.5	2.0	2.1	1.2	1.6
Long-term capital, net		-0.5	-0.2	-0.0	-0.6	-0.5	...
Short-term capital, net 3/		-2.5	-1.6	-0.9	-1.1	-1.6	...
Capital account balance		-3.0	-1.8	-0.9	-1.7	-2.2	...
Gross international reserves 4/		2.8	2.7	2.8	3.6	3.7	...
			(In billions of rand)				
Central government finances 5/							
Revenue 6/		48.1	61.1	66.8	72.3	75.8	88.2
Expenditures		55.9	65.5	73.9	85.9	104.9	114.2
Balance		-7.8	-4.4	-7.1	-13.6	-29.1	-26.0
(In percent of GDP)		-3.8	-1.8	-2.6	-4.4	-8.4	-7.0
Monetary aggregates			(Percentage change)				
Broad money, end-period		27.2	22.6	12.2	12.5	8.0	...
Bank credit to private sector, end-period		27.7	20.2	15.7	14.5	8.7	...
Exchange rates							
Period average							
U.S. dollars per rand		-10.4	-13.3	1.3	-6.3	-3.2	...
Nominal effective rate		-13.8	-8.8	-5.6	-6.2	-6.0	...
Real effective rate		-5.5	0.4	3.0	3.8	3.8	...
End-period							
U.S. dollars per rand		-18.8	-6.2	-1.0	-6.6	-10.2	...
SDRs per rand		-14.4	-4.0	-8.6	-7.1	-6.5	...
			(In percent)				
Interest rates (period average)							
Discount rate		14.5	18.0	18.0	17.0	14.0	...
Treasury bill rate		12.0	16.8	17.8	16.7	13.8	...
Government bond yield		16.4	16.9	16.2	16.3	15.4	...
Prime rate		15.3	19.8	21.0	20.3	18.9	...

Sources: South African Reserve Bank, Quarterly Bulletin; and International Monetary Fund, International Financial Statistics.

1/ Excludes statistical discrepancy.
2/ At current prices; nonagricultural sector.
3/ Includes errors and omissions of current as well as capital account.
4/ End-period; national valuation of gold.
5/ Department of Finance data. Fiscal year begins April 1. Budget data for 1993.
6/ Ordinary revenue.

CHART 1
SOUTH AFRICA

OUTPUT AND EMPLOYMENT, 1980-92

(Indices, 1980 = 100)

OUTPUT AND POPULATION

Population

Real GDP

Real GDP per capita

POPULATION AND EMPLOYMENT

Economically active population

Population

Formal sector employment

OUTPUT AND EMPLOYMENT

Public sector employment

Real nonagricultural GDP

Private nonagricultural employment

Source: South African Reserve Bank.

to GDP; by contrast, in 1991 more domestic demand was satisfied by imports and export growth fell, so that the foreign balance reduced GDP. During this phase of the recession declines in production were concentrated in the manufacturing and construction sectors (Appendix Table 5). Agricultural production grew strongly in 1989 but reverted to normal levels thereafter. The service sector was fairly recession-proof, mainly because the provision of general government services continued to increase through the recession.

In 1992, real GDP declined by 2 percent as the recession entered a new phase, in which the dominant factor was the severe drought affecting much of the region. 1/ The 1991/92 maize harvest was very poor--about half the usual size--and overall agricultural production declined 25 percent, contributing 1½ percentage points to the decline in GDP. The effect of the drought was compounded by severe contractions in manufacturing (3 percent decline) and construction (6 percent decline), which were again related to low fixed investment and high import penetration. There was some growth in mining, mostly in the gold sector, where wage restraint and rationalization had brought increased profitability; the rest of the mining sector, however, performed less well (Appendix Table 7). The tertiary sector made no net contribution to GDP growth, as modest growth in the transport, financial, and general government subsectors offset a recession-induced decline in wholesale and retail trade.

Viewed from the demand side, 1992 was characterized by a broad-based weakness in expenditures, offset partially by a strong performance of manufactured exports and a slowdown in the pace of inventory destocking. Real fixed investment fell a further 10 percent, owing to increased uncertainty and the completion in 1991 of the large parastatal Mossgas project. Private consumption, which had held up reasonably well in the earlier part of the recession, fell by 2.3 percent, reflecting both reduced disposable income and a buildup in the stock of consumer credit during the preceding four years. The main positive contribution to demand (equivalent to about 1 percent of GDP) was a sharp reduction in the rate of inventory decumulation. 2/ Nonetheless, by year-end, inventories ratios were at record low levels; this reflected a longer-term trend (related to the gradual adoption of modern inventory management techniques) as well as the short-term influence of high real interest rates, and possibly the reduction of strategic stockpiles. Exports of goods and nonfactor services grew by 1 percent in real terms, as a strong increase in manufactured exports more than offset declines in the exports of gold, agricultural products, and nonfactor services. Imports, however, increased by 5.5 percent in real terms--reflecting the impact of the drought, the appreciation of the real exchange rate, and the high import content of manufactured exports--so the

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1/ In South Africa, regions growing deciduous fruit were spared the effects of the drought.

2/ In spite of an unusual, drought-related, rundown of inventory in the agricultural sector.

foreign balance imparted a negative impulse to growth equivalent to 1 percent of GDP.

During the first half of 1993 output was nearly 1 percent higher than in the second half of 1992 (seasonally adjusted, at an annual rate). This recovery is almost entirely attributable to the end of the drought. Evidence on turnaround of demand is mixed: export volume declined in the first quarter before rebounding strongly during the second quarter; fixed investment continued to decline in real terms (if more slowly than before); and consumption remained relatively weak.

Unemployment is severe (Chart 2). The proportion of South Africa's economically active population unable to find work in the formal sector has more than doubled from a pre-1975 norm of about 20 percent to more than 40 percent in recent years. 1/ Official figures suggest that the economically active population in 1991 (the most recent year for which census data are available) was 13 million, of whom 8 million (61 percent) were employed in the formal sector. 2/ The remaining 40 percent of the labor force (5 million individuals) was either employed in the informal sector (2-2½ million) or unemployed (2½-3 million). 3/ Further declines in employment after 1991, combined with continued growth of the labor force, imply that the proportion of the labor force unable to find work in the formal sector may have risen above 45 percent in 1993.

An unusual feature of the current recession is that labor productivity, which generally falls during the initial downswing, actually rose slightly. Instead of hoarding labor in the early phase of the recession, firms shed labor. A number of factors contributed to this behavior: high real wages made labor hoarding expensive while the perceived costs of rehiring after the recession ended had been lowered by already high unemployment and fewer institutional constraints. Thus, in 1989, the first year of the recession, employment in the nonagricultural sectors rose by less than 1 percent compared with real output growth of more than 2 percent (Appendix Table 8). Thereafter, employment fell steadily and by 1992 employment in the nonagricultural sector was down by more than 4 percent compared with the level in 1989. The decline was concentrated in the private sector; the employment loss in the mining sector was a particularly striking 15 percent relative to the 1989 level, while employment in manufacturing was cut by

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1/ The economically active population is defined as persons who are working, temporarily absent from work, or unemployed in the sense of being available for and actively seeking employment.

2/ The cited figures incorporate a downward revision of the estimated economically active population (EAP) by about 1 million; the revision reduces the percent of the EAP unable to find formal sector jobs by some 5 percentage points.

3/ Informal sector employment includes a wide variety of activities including crafts (33 percent), hawking and trading (25 percent), transport (6 percent), and scavenging (6 percent).

CHART 2
SOUTH AFRICA

ECONOMIC DEVELOPMENTS, 1983-92
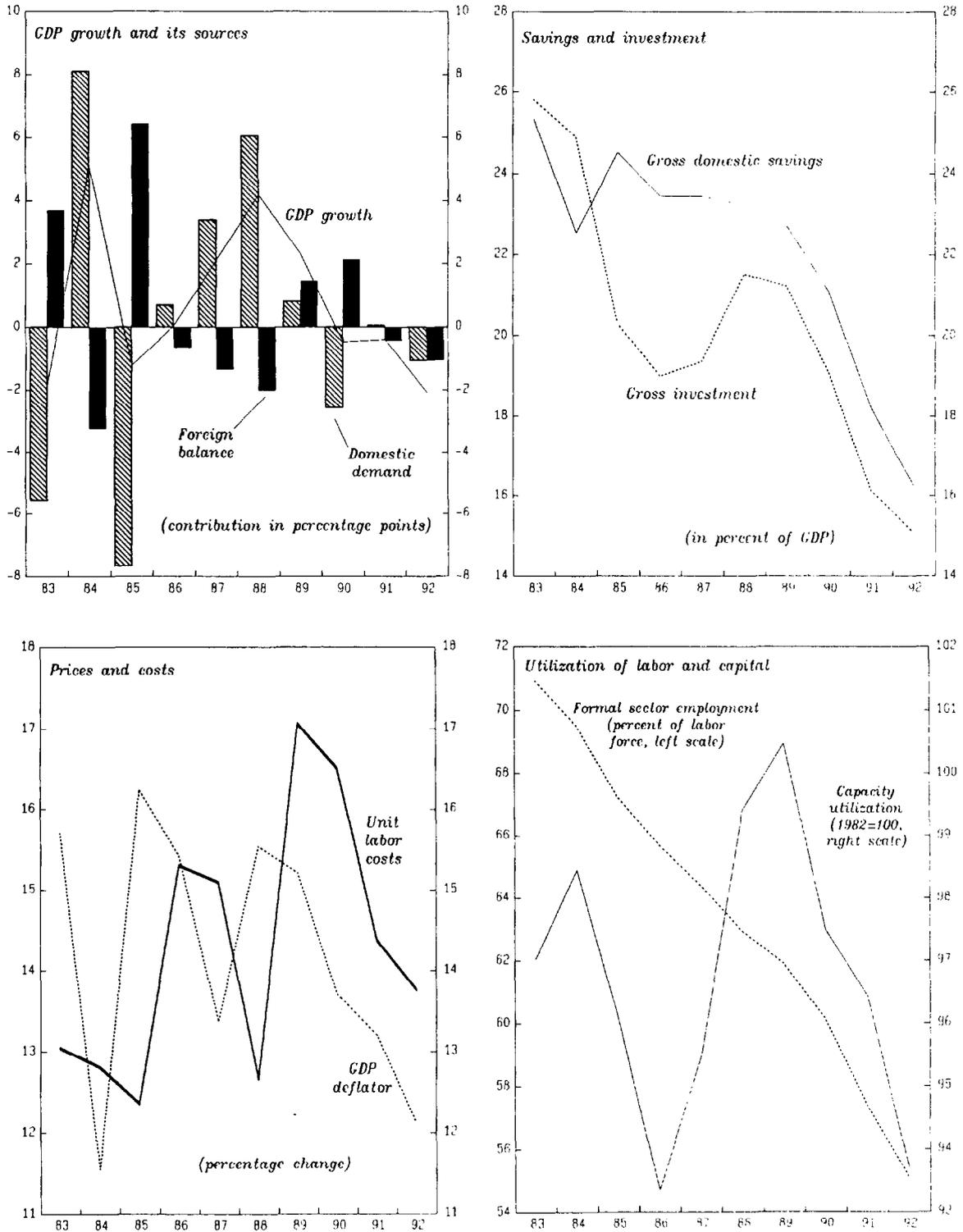
Source: South African Reserve Bank, Quarterly Bulletin.

5 percent. By contrast, public sector employment levels were sustained through the recession, rising by 2 percent during the three years through 1992.

Real wages continued to rise through the recession years in spite of high and rising unemployment. Wage increases in the public sector (more than 3 percent a year in real terms) and in the manufacturing sector (2.8 percent a year in real terms) were particularly rapid. In the rest of the private sector the increase in real remuneration was more modest so the economy-wide average was about 2 percent a year during 1989-92 (Appendix Table 9). By contrast, aggregate productivity rose by only 1 percent a year during the same period; consequently real unit labor costs increased by 1 percent a year. The stubborn upward trend in the real wage provides one part of the explanation of South Africa's high unemployment and depressed output. By causing unit labor costs to rise--and therefore firms' gross margins to fall--the wage increase also contributed to the reduction in the investment ratio. Chapter II below analyzes the labor market in some detail and advances several explanations for the failure of the real wage to fall in the face of unemployment.

The last three years have seen a significant abatement of inflation, which averaged around 15 percent during the 1980s, and has now fallen into single digits (Appendix Table 10; Chart 3). Measured by the GDP deflator, inflation decelerated each year from 1990 on, to reach 12 percent in 1992 compared with 15 percent in 1989. The drop-off in CPI inflation was more recent and more pronounced, reflecting the importance in the CPI basket of food prices, which rose sharply relative to the average through the third quarter of 1992, and fell relative to the average thereafter. By December 1992, the 12-month increase in the CPI had reached 9.5 percent, down from 16 percent a year earlier. During the first nine months of 1993 the 12-month CPI inflation rate has remained in the 9-10 percent range in spite of a 4 percentage point increase in the value-added tax (VAT) rate, which is estimated to have increased the CPI by 2 percentage points; thus the underlying rate of CPI inflation may be about 7-8 percent.

The reduction of inflation rates masked some important shifts in relative prices during 1989-92. The prices of vehicles and beverages each rose by 4.5 percent a year relative to the overall CPI; the cost of housing (a larger item in the basket, with a weight of 21 percent) fell by 6 percent a year relative to the CPI; and in 1992 the price of food rose by about 10 percent relative to the index. Finally, imported goods became cheaper relative to domestic goods as the rand appreciated in real effective terms.

The investment ratio in South Africa has fallen dramatically--from 25 percent of GDP in 1984 (equal to the norm over the preceding 15 years) to about 15 percent in 1992 (Chart 1 and tabular material below). For the eight-year period, the counterparts of this 10 percentage point fall in investment were a 3½ percentage point decline in net foreign savings, a 3½ percentage point increase in government dissaving, and a

2 percentage point fall in domestic private saving. The figures for the whole period are composed of three significant movements within the period. First, the 1985 moratorium on bank lending to South African firms turned the country into a net supplier of saving to the rest of the world. Repayments of bank debt forced the current account to move by 6½ percentage points, from a deficit of 2.4 percent of GDP in 1984 to surpluses of more than 4 percent in 1985-87; the external drain on saving subsequently moderated, reaching a low of 1.2 percentage points of GDP in 1992. Second, significant increases in government expenditure on social services raised government dissaving to more than 4 percent of GDP in 1992, up from zero two years earlier. And, third, domestic private saving, which had risen to 25 percent of GDP in 1987 (partially replacing the lost foreign saving), fell back gradually to about 20 percent of GDP in 1992.

Saving-Investment Balances, 1967-92

(In percentage points of GDP)

	Private saving	General government saving (gross)	Foreign saving 1/	Change in inventories	Fixed investment		Total saving and investment
					Private	Public sector 1/	
1967	18.2	5.9	2.8	4.5	12.3	10.1	26.9
1972	21.3	3.5	0.9	-1.2	14.1	12.8	25.7
1977	25.1	2.4	-0.6	-1.1	13.7	14.3	26.9
1982	19.8	1.0	4.4	-2.7	15.9	12.0	25.2
1984	23.1	-0.6	2.4	0.5	14.6	9.9	24.9
1985	24.8	-0.3	-4.2	-3.0	13.1	10.2	20.3
1986	24.1	-0.6	-4.5	-1.2	11.6	8.6	19.0
1987	25.3	-1.8	-4.1	0.2	11.8	7.4	19.4
1988	23.3	-0.1	-1.7	1.6	13.3	6.6	21.5
1989	22.7	--	-1.5	0.4	13.8	7.0	21.2
1990	20.9	0.1	-2.0	-1.0	13.4	6.7	19.1
1991	20.5	-2.3	-2.1	-1.9	12.4	5.7	16.1
1992	20.4	-4.2	-1.2	-0.9	11.4	0.5	15.0

1/ Positive foreign saving corresponds to an external current account deficit.
2/ Public authorities (general government and business, and public enterprises) and public corporations.

Viewed from the perspective of longer-term growth, the decline in investment and saving brought gross fixed investment in 1992 to a low of 16 percent of GDP, and net fixed investment to 1 percent. Staff calculations, elaborated in Chapter IV, indicate that for growth to resume it may be necessary to raise fixed investment back to pre-1985 levels--an increase of 8-10 percentage points. Some additional saving may be forthcoming from the external sector but a pickup of investment of this magnitude would certainly be facilitated by a reduction in government dissaving.

CHART 3
SOUTH AFRICA
PRICES AND EXCHANGE RATES, 1984-93

PRICES
(12-month percentage change)

CPI

Producer prices

EFFECTIVE EXCHANGE RATES
(Indices: 1980=100)

Real effective
exchange rate (SARB)

Real effective
exchange rate (IFS) 1/

Nominal effective
exchange rate (IFS)

Nominal effective
exchange rate (SARB)

EXCHANGE RATES
(U.S. dollars per rand)

Commercial rand
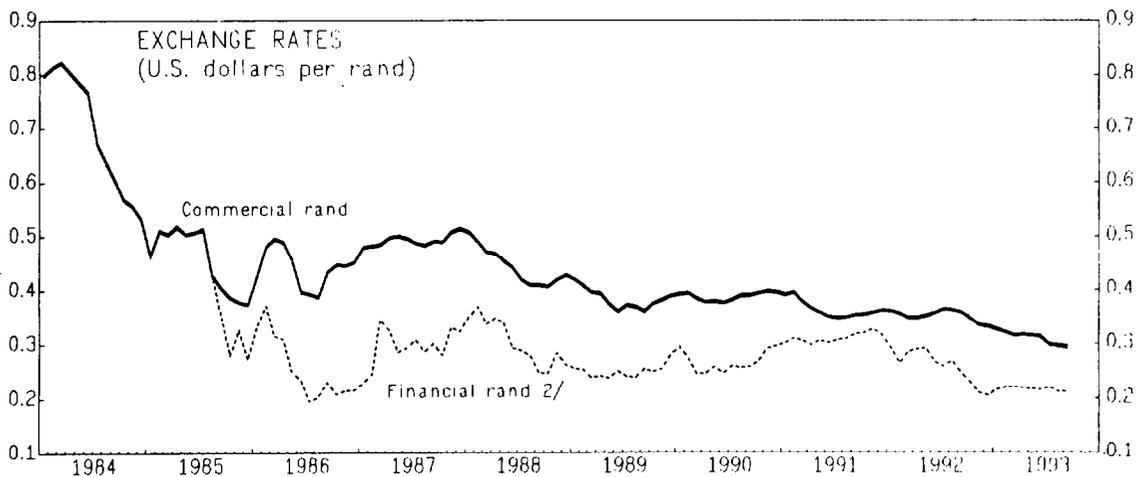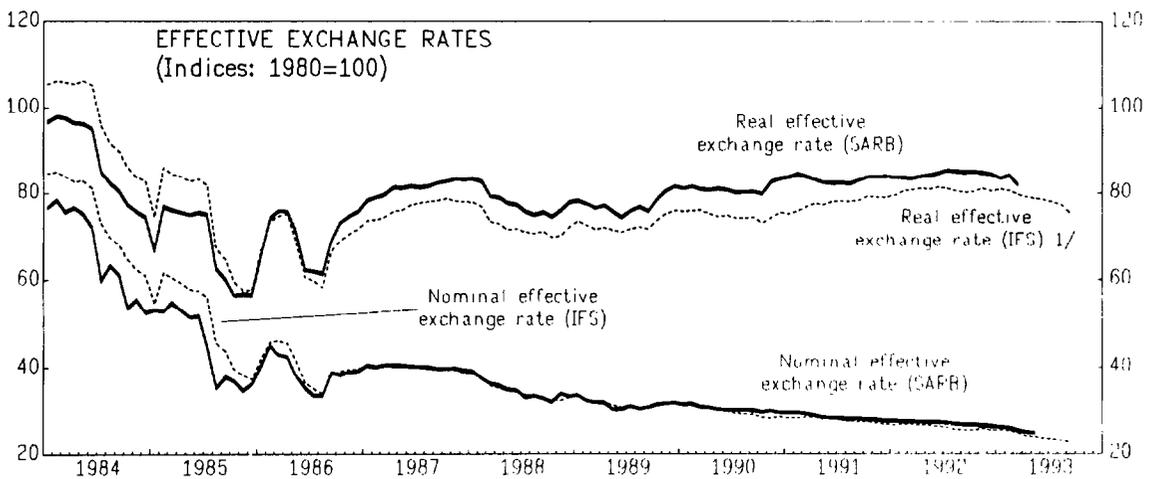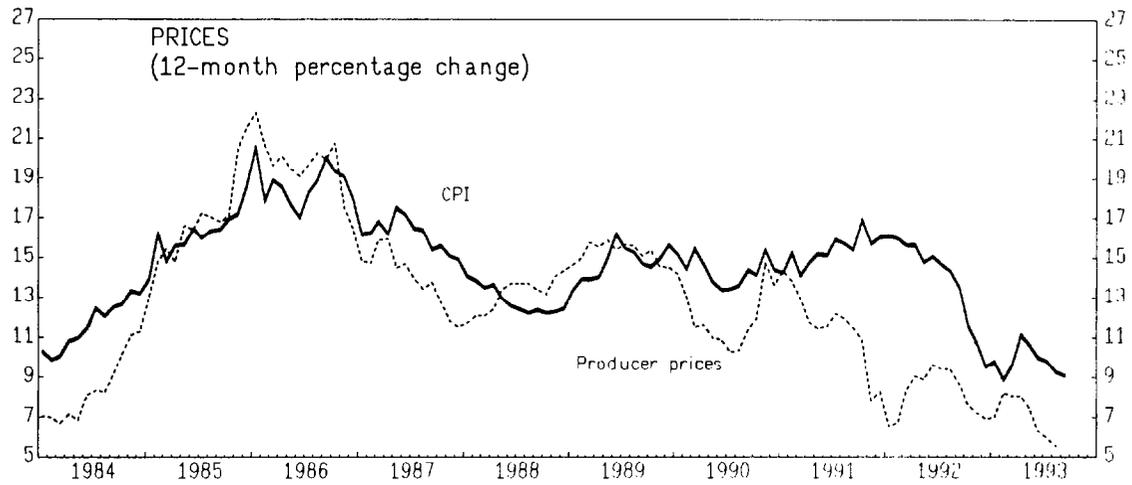
Financial rand 2/

Sources: South African Reserve Bank, Quarterly Bulletin; and IMF, International Financial Statistics.

1/ Based on relative consumer prices.
2/ The financial rand was unified with the commercial rand in early 1983 before being
reintroduced in 1985 following the imposition of financial sanctions.

2. Fiscal policies

The fiscal position of central government worsened sharply between 1989/90 and 1992/93. 1/ The deficit (excluding extraordinary revenue) increased from 2 percent of GDP to 8.5 percent, that is by 6.5 percentage points (Appendix Table 11; Chart 4). About one third of this deterioration reflected a decline in revenue, which was due principally to the introduction of a value-added tax in September 1991 at a rate lower than the general sales tax that it replaced (Appendix Tables 12 and 13). 2/ The effect on revenue of cuts in import surcharge rates in 1990 and 1991 was fully offset by increases in receipts from the fuel levy. Income taxes have remained about constant in relation to GDP, but a significant part of the income tax burden--about 1.5 percentage points of GDP--has shifted from companies to individuals.

Central government expenditure increased by 4 percentage points of GDP between 1989/90 and 1992/93. Of this increase, 1 percentage point was due to higher interest payments and another 1 percentage point to drought relief. The remainder reflected larger appropriations for health, educa-tion, welfare and other social services intended to redress the "social backlog" in the provision of services to black South Africans. 3/ Data for general government show a rise in social expenditure of 3 percentage points of GDP between 1990/91 and 1992/93 (Appendix Tables 14 and 15). Defense expenditure fell over the same period, but the savings have all been diverted to other branches of the protection services--in particular, to the police. A more detailed account of the functional breakdown of expenditures is made difficult by the extraordinary opaqueness of the accounts; the functional purpose of the large appropriations that go to the tricameral Parliaments, the provinces, and the homelands is not made clear. The existence of these transfers also reduces the meaning of an economic classification of central government expenditure. However, an economic breakdown of general government expenditure is only available starting in 1992/93.

There has also been significant off-budget activity in recent years. Examples include various taxes on fuel which do not flow to the budget and expenditure by the homelands, amounting to about R 2 billion (¼ percent of GDP) in 1992/93, which is financed by government-guaranteed overdrafts. 4/ Another example is the Government's practice of offering subsidized forward cover for foreign borrowing to the parastatals through the Reserve Bank; the

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1/ The fiscal year begins April 1.
2/ The 1991/92 budget proposed a VAT rate of 12 percent, whereas the general sales tax had a rate of 13 percent. In the event, the VAT was introduced at a rate of 10 percent.
3/ For a fuller discussion of this issue, see Chapter III.
4/ Such expenditure is recorded in the consolidated fiscal accounts; for a discussion of the deficits of different levels of South African government, see Chapter III.

losses incurred in providing such cover are not brought on-budget. 1/
Also, various social expenditures, such as the R 2 billion used to establish
the Independent Development Trust in 1990/91, have taken place off-budget.
Similarly, the Development Bank of South Africa now receives the subvention
it previously received through the budget as a dividend from the Industrial
Development Corporation (IDC), which otherwise would have been paid to the
Exchequer. This example of cross-subsidization between public sector
entities is not unique.

Within the constraints imposed by the perceived need for extra social
expenditure, an attempt was made in the March 1993 budget to reverse the
deterioration in the fiscal position; a deficit of 7 percent of GDP was
targeted for 1993/94, compared with an outturn of 8.5 percent in
1992/93. 2/ The 1993/94 budget anticipated an increase in revenue of
1 percentage point of GDP: the positive influence of an increase in the VAT
rate from 10 percent to 14 percent (albeit combined with a widening of the
list of zero-rated foods) was partially offset by a cut in the tax rate on
undistributed corporate profits from 48 percent to 40 percent. In addition,
no inflation adjustments were made to individual income tax brackets, the
Section 37e tax concessions were closed to new projects, 3/ and a 15 per-
cent tax on corporate dividend distributions was introduced. On the
expenditure side, the budget envisaged a saving of about 1 percentage point
of GDP in drought-relief and an increase in interest costs of about
½ percentage point. As in previous years, the 1993/94 deficit was expected
to be financed on the domestic capital market (Appendix Table 16).

Results of the first six months of 1993/94 suggest that the target for
the deficit of 7 percent of GDP is achievable. Expenditure for the year is
likely to be a little over budget on account of ad hoc drought relief and
job creation programs. After a slow start, there has been a recovery in
revenue collections and the annual total is now expected to be slightly
above the budget projections. While individual income tax receipts are

---

1/ Payments made by the Government to the Reserve Bank for such losses
are treated as below-the-line extraordinary transfers which increase
government debt but do not finance the recorded deficit (Appendix Table 16).
Indeed, even those accumulated losses, incurred by the Reserve Bank on
forward operations, which have not yet been reimbursed, are included in the
stock of government debt (in the Gold and Foreign Exchange Contingency
Reserve Account) (Appendix Table 17).

2/ Excluding extraordinary revenue. In recent years the principal source
of extraordinary revenue has been receipts from the sale of strategic oil
reserves (Appendix Table 16).

3/ Section 37e provided accelerated depreciation allowances to approved
export beneficiation projects (see SM/92/189); notable examples of large-
scale projects which have been granted Section 37e status are the Columbus
(stainless steel) and Alusaf (aluminum) undertakings. The budgetary cost of
the allowances granted under Section 37e--which are tradable in that they
can be converted into negotiable tax certificates--is estimated to be
R 1.5 billion over 1993-97.

CHART 4
SOUTH AFRICA
GOVERNMENT FINANCES
(In percent of GDP)

BUDGET 1/ 2/

Expenditure

Revenue

MAIN COMPONENTS
OF REVENUE 1/ 2/

Income taxes

General sales taxes/VAT

MAIN COMPONENTS
OF EXPENDITURE 2/ 3/

Education

Protection
services

Health and
welfare

GOVERNMENT DEBT 1/

Total

Domestic
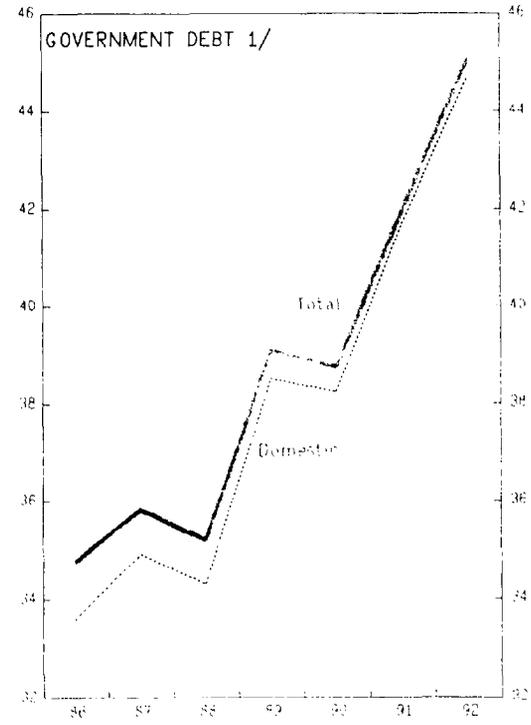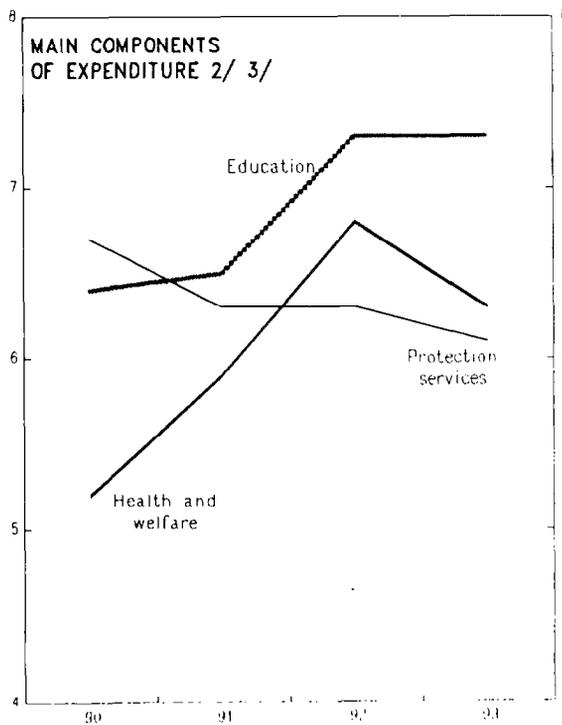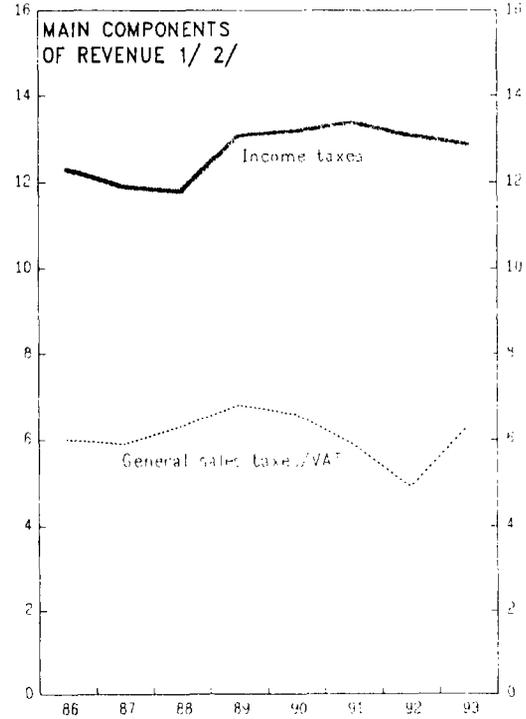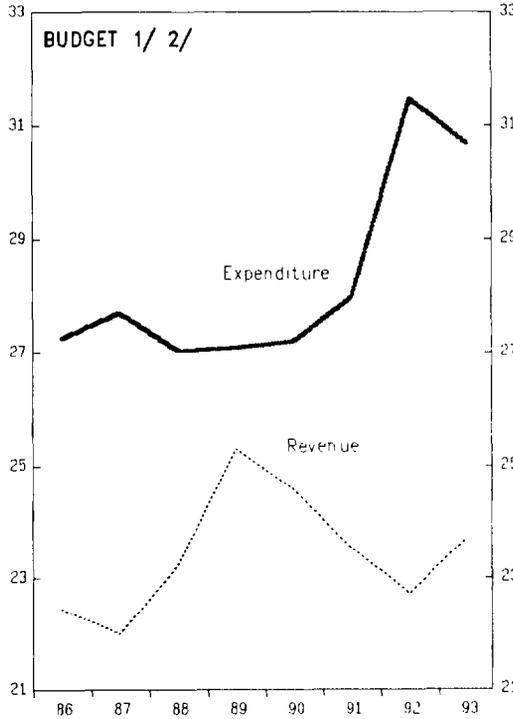
Sources: South African Reserve Bank, Quarterly Bulletin; Department of Finance.

1/ Central Government.
2/ Fiscal year beginning April 1; budget estimate for 1993/94.
3/ General government.

running below the budgeted level, receipts from the VAT, at the now higher rate of 14 percent, are above budget projections. Sales of strategic oil stocks are predicted to occur on a larger scale than was anticipated in the budget; while not reducing the deficit, these extraordinary revenues do reduce the amount of finance that needs to be raised on the capital market.

The large government deficits incurred since 1989/90 have led to a rapid increase in government debt (Appendix Table 17). However, the liabilities of the Government are substantially broader than the stock of its own paper (estimated at 45 percent of GDP at the end of 1992). First, there is currently almost R 50 billion (14 percent of GDP) in government-guaranteed debt, some of which--in particular, R 11 billion owed by the homelands--will almost certainly have to be assumed by the Government. More than two thirds of the government guarantees not related to the debt of the homelands are for the debt of two parastatals, Eskom (the electricity utility) and Transnet (the transportation conglomerate).

Second, actuarial valuations conducted in 1989-91 revealed the five state pension funds to be only about 50 percent funded, with total under-funding amounting to R 37.3 billion (10 percent of current GDP). 1/ Remedial steps taken since include increasing the State's contributions to the pension funds and one-off special transfers from the Government; from 1990/91 to 1992/93 extraordinary contributions to the state pension funds totaled R 4 billion (Appendix Table 17). 2/ As a result, there has been some reduction in the degree of underfunding over time and it is expected that this process will continue in the future.

1/ These numbers would be even larger if the underfunding of parastatal pension funds--in particular, of Transnet, SAPOS (postal services), and Telkom (telecommunications)--were included.

2/ As with transfers made to reimburse the Reserve Bank for forward cover losses, these special pension contributions are treated in the fiscal accounts as below-the-line items which increase the financing requirement. These contributions have boosted the already sizable current surpluses of the pension funds, which have become significant providers of domestic savings in recent years; in 1990/91 and 1991/92, official pension fund savings exceeded 5 percent of GDP. The Reserve Bank classifies pension fund savings as household (contractual) savings; however, an alternative procedure would be to include them in government savings, thus mimicking the situation that would prevail under a Pay-As-You-Go pension scheme. The fiscal balance would then be measured by consolidating the state pension funds in with general government. If this alternative were to be followed, the trend in government savings shown in the Savings-Investment table in the previous section would look quite different, particularly since 1987. The exercise would also reveal a sharp decline in discretionary personal savings (i.e., net of institutional savings) which might be explained by successes achieved in redistributing income. However, it has been argued that the worsening trend in discretionary personal savings observed since the early 1980's has occurred precisely because contractual savings have improved over the same period.

In consequence, government debt is significantly greater than the 45 percent of GDP shown in Appendix Table 17. If government guarantees to the homelands are added, the Government's debt ratio rises to 49 percent of GDP; if all government guarantees and the pension underfunding are added, the ratio increases to 72 percent of GDP.

3. Monetary policies

South Africa's monetary policy changed course in 1988-89 (Chart 5). A tightening of money market conditions led banks to raise deposit rates by nearly 6 percentage points during 1988 and by another 3 points during 1989. The yields on long-term stock did not change significantly, however, so that from late 1988 to late 1991 bank deposit rates were higher than the current yields on long-term government and ESKOM stock. 1/ The improvement in the relative yield of bank deposits, coupled with interest rate expectations consistent with the new tougher stance of the Reserve Bank, set in motion a process of reintermediation which caused M3 velocity to fall from nearly 2 in 1987 to 1.8 at end-1988 and 1.7 at end-1989. 2/ As a result, the growth rate of M3 actually rose during this period of tightening, to 27 percent in 1988 and a still high 22 percent in 1989, compared with 17 percent in 1987 (Appendix Table 19). After 1989 velocity was more stable so the effects of the tightened credit policy on monetary growth became more transparent: M3 grew by about 12 percent in 1990-91 and 8 percent in 1992, in line with a deceleration in the demand for money as inflation abated and the recession deepened.

During 1990-92, interest rates on bank deposits fell relative to the yields on a range of other assets, reversing much of the relative rise in deposit rates during 1988-89. Velocity did not rise immediately, however, partly because regulatory changes in February 1991 caused an offsetting structural decline. 3/ However, during the first six months of 1993, as nominal rates continued to fall and expectations of further declines were strengthened by lower inflation rates, disintermediation did set in and velocity rose by 5 percent relative to its value in the fourth quarter of 1992. Consequently M3 growth was slightly negative during this period,

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1/ The yield on ESKOM (Electricity Supply Commission) stock and the yield on long-term government stock move together.

2/ To obtain an estimate of velocity at a point in time, velocities were calculated using the end-of-period money stock and the average of the quarterly GDP figures for the quarter just ended and the subsequent quarter.

3/ On the implementation in February 1991 of the Deposit-Taking Institutions Act, certain off-balance sheet items were converted into conventional deposits and advances.

CHART 5
SOUTH AFRICA

SELECTED MONETARY INDICATORS, 1980-93

CHANGE IN M3
(12-month percentage change)

M3 VELOCITY

INTEREST RATES

32-day notice deposits

Government stock
(10-year)

3-month
deposit rate

Source: South African Reserve Bank, Quarterly Bulletin.

bringing the 12-month growth rate of M3 to 3.3 percent in June, well short of the expansion of nominal GDP (Appendix Table 20). 1/

Regulatory changes and changes in the structure of interest rates have often caused M1A (which includes notes, coin, and checking deposits) to behave differently from M3. This was the case in 1993, when the growth rate of M1A was unusually high and M3 growth was exceptionally low (Appendix Table 19). The rapid growth of M1A was due to mutually reinforcing increases in demand and supply. The fall in the structure of interest rates, particularly on interest-bearing bank deposits, lowered the opportunity cost of holding sight deposits; this, together with the pickup in economic activity, increased demand. Subsequently, the gradual unification of reserve requirements--begun in April 1993--lowered the cost to banks of providing short-term deposits and raised the cost of providing long-term deposits, thereby increasing the supply of short-term deposits.

The growth of bank credit to the private sector decelerated steadily during 1989-91, mirroring the decline in economic activity and M3 growth (Appendix Table 21). Net credit to Government fluctuated more widely, with years of net borrowing alternating with years of net repayment. In 1992, the stock of bank credit rose by only 10 percent--a decline in real terms-- while credit to the private sector increased by an even lower 8.7 percent. The most pronounced decelerations were in the growth of hire-purchase loans, bank overdrafts, and leasing finance. In contrast, the growth in mortgage lending slowed only slightly. Borrowers made increased use of this type of credit because of its flexibility (while collateralized on real estate it may be used for any purpose) and relatively attractive interest rates; for their part, banks promoted mortgage advances because they were subject to relatively low capital requirements. In the first six months of 1993 bank credit actually decreased, reflecting a reduction in the stock of bills discounted and a net repayment of credit to Government, which had increased strongly in the previous year. The effect on aggregate bank credit was only partly offset by an increase in the use of mortgage advances.

The influence of Reserve Bank policies on the money market can be measured by the extent to which banks are driven by a shortage of cash to seek accommodation at the discount window. In light of the decline in domestic credit, the banking sector became fairly liquid in 1991 and early 1992. Reserve bank purchases of foreign exchange reserves as well as domestic assets contributed to this, and daily accommodation declined from about R 2 billion in early 1991 to about R 1 billion in the first months of 1992. Subsequently money market conditions tightened as the Reserve Bank sold foreign exchange and domestic assets in order to resist pressures on

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1/ Other factors contributing to the disintermediation may have included the large spread between deposit rates and lending rates and a selloff by banks of banker's acceptances when these assets lost their liquid asset status in April 1993. In part the disintermediation took the form of the consolidation of household deposits and borrowing under flexible mortgage facilities and some consolidation of intracorporation balances.

the rand stemming from a deterioration in the balance of payments. This left banks short of cash and drove the daily accommodation at the discount window up to about R 3 billion.

Bank rate (the rate at which the Reserve Bank provides accommodation) was reduced by 4 percentage points from early 1992 to mid-1993 (Appendix Table 22). Interest rates charged or paid by commercial banks followed suit, with the result that the short-term rates generally dropped relative to long-term interest rates, with implications for disintermediation that have already been discussed. The decline in nominal interest rates coincided with a progressive reduction in inflation and, presumably, inflationary expectations. Calculations using the ex post CPI inflation rate during the most recent 12 months as a proxy for inflationary expectations suggest that real interest rates were actually higher in late 1992 and early 1993 than in 1991: in real terms, Bank rate rose from less than 1 percent in early 1992 to 4 percent at year-end and about 3 percent during 1993; the real prime overdraft rate increased from the range 3-4 percent in 1991 to nearly 7 percent by end-1992 and was about 6 percent in the first nine months of 1993; and the yield on long-term government bonds, which was about 1 percent in real terms in 1991, reached 5 percent at end-1992 and 4.5 percent in 1993 (Chart 6).

During 1992-93 a number of changes were made in the regulatory environment, notably in cash reserve requirements, the techniques of discount window accommodation, and the placement of government deposits.

Reserve requirements are being lowered and unified. Lowering reserve requirements will make them less burdensome for the affected banks; unifying them has the effect of insulating banks' reserve requirements from fluctuations stemming from changes in the composition of M3. Prior to April 1993, reserve requirements were imposed on short-term deposits only, at the rate of 4 percent (plus a supplementary, interest-bearing, reserve requirement of 1 percent). In April 1993, the South African Reserve Bank (SARB) commenced a phase-in of uniform reserve requirements that was intended to lead to a 1.5 percent reserve requirement for all deposits. Reserve requirements on short-term deposits were cut to 3 percent in April and were to be reduced by steps of 0.1 percent each month for 15 months; at the same time reserve requirements on long-term deposits were to be increased by 0.1 percent each month for 15 months. In August 1993, when reserve requirements on short-term deposits had reached 2.5 percent, the program was accelerated and the target level of reserve requirements was reduced to 1 percent. This was done by lowering the reserve requirement on short-term deposits by a full percentage point and then resuming the monthly adjustments by 0.1 percent a month. If this schedule is adhered to, reserve requirements will become uniform in January 1994 at the rate of 1 percent. The 1 percent supplementary reserve requirement remains in place.

The method of providing discount window accommodation was revised with effect from May 1, 1993. Previously, the Reserve Bank had provided accommodation by rediscounting money market paper (Treasury bills, Reserve Bank bills, Land Bank bills and liquid bankers' acceptances) as well as by

CHART 6
SOUTH AFRICA
INTEREST RATE DEVELOPMENTS, 1987-93
(In percent)

IN NOMINAL TERMS

Long-term government
bond yield

Three-month
bankers'acceptances

IN REAL TERMS 1/

Long-term government
bond yield

Three-month
bankers' acceptances
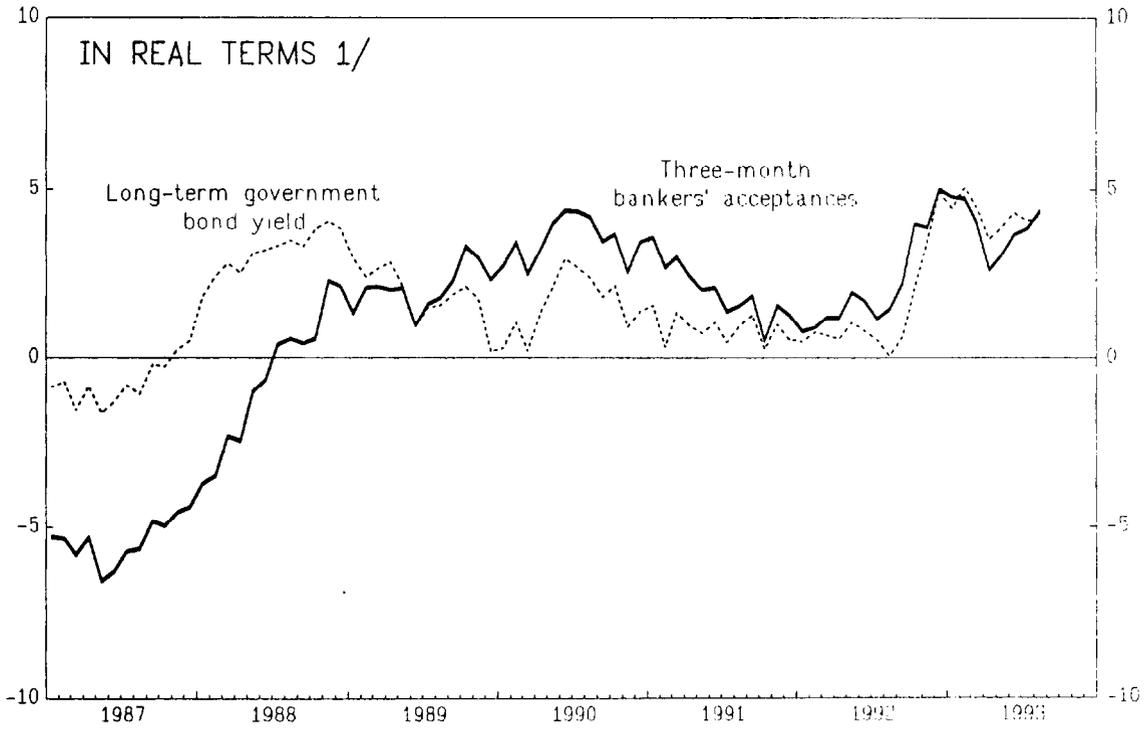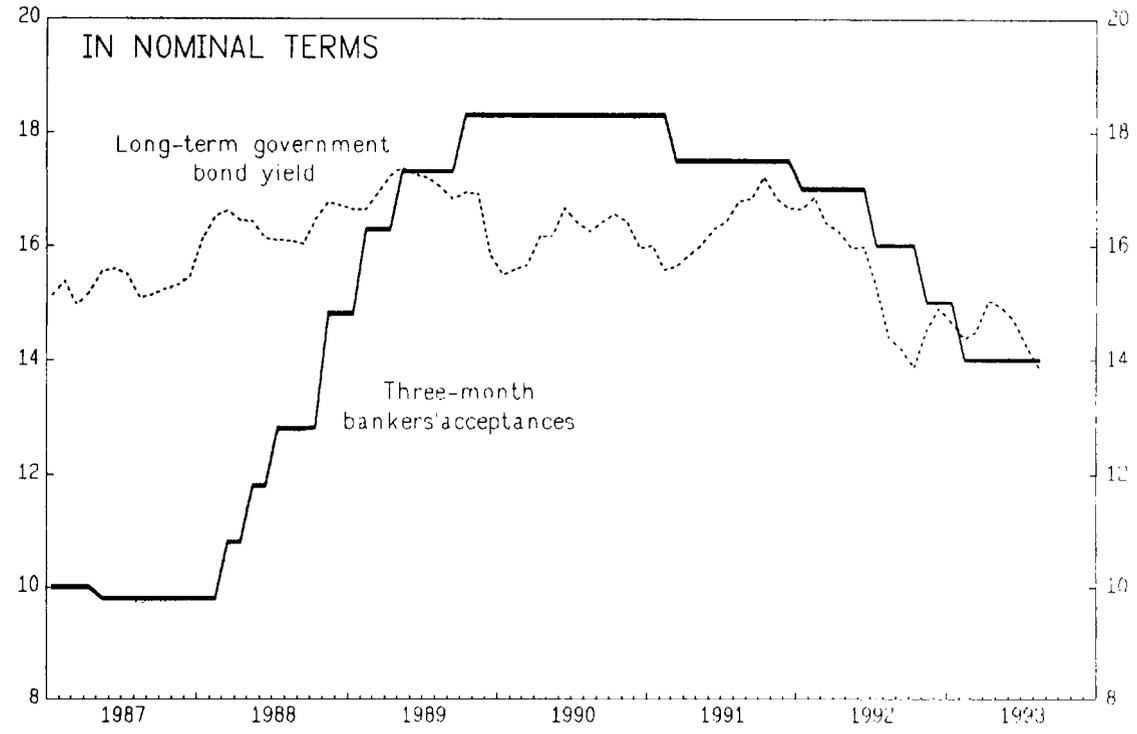
Source: South African Reserve Bank, Quarterly Bulletin; IMF, International Financial Statistics.

1/ Corrected for the change in consumer prices.

extending overnight loans against collateral. This system was complex and potentially open-ended since the supply of eligible paper--particularly bankers' acceptances--was not under the control of the Government or the Reserve Bank. Under the new system, the Reserve Bank will provide accommodation exclusively by making overnight loans against collateral. The assets eligible to be used as collateral are Treasury bills, government stock, Land Bank bills and Reserve Bank bills. 1/ The stock outstanding of these assets is finite and under government control. There are three tiers of accommodation. For collateral of short maturity (less than 92 days), overnight loans are extended at Bank rate. For collateral of longer maturity (92 days to three years), loans are extended at Bank rate plus one percent. Finally, accommodation against other types of paper may be provided in exceptional circumstances on terms to be negotiated. The new method of accommodation is intended to enhance control over the evolution of monetary aggregates; it is also in line with a deliberate policy of encouraging the growth of the treasury bill market.

In June 1993, the Reserve Bank began transferring government deposits from the Exchequer account with the Reserve Bank to government accounts at private banks. To date, some R 7 billion has been transferred. These transfers are an interim measure pending new legislation that will set up a system of government Tax and Loan Accounts with private banks, leaving only the Paymaster General's account at the Reserve Bank. This change is expected to simplify operations by ending the need for intra-month liquidity management to offset movements in government accounts, and to improve transparency by clarifying the intentions of SARB activity.

4. The external sector

From 1985-92, financial sanctions, which all but stopped commercial bank lending to South Africa, were the dominant influence on the balance of payments. As South African debtors were unable to roll over their largely short-term external debts, the SARB imposed an embargo ("standstill") on repayments of private debt to foreign commercial banks and subsequently negotiated a series of interim agreements with creditor banks, providing for partial repayment of principal. 2/ In addition, capital outflows were restricted by reintroducing the financial rand system, which normally constrains portfolio divestment by nonresidents collectively to zero. 3/ The offset provided by these measures was only partial, however, and thus in 1985 South Africa's capital account balance moved sharply into deficit where it has remained since; naturally, the contraction in net borrowing forced an inverse movement in the external current account, which has remained in surplus since 1985 (Chart 7). The adjustment that was needed to bring about

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1/ To date, no Reserve Bank bills have been issued.
2/ Payments of interest were made on schedule. The debt standstill is described in more detail below.
3/ Exceptions are when commercial rand deposits are redesignated financial rand and when the Reserve Bank intervenes in the market (see Chapter V).

the current account surplus was effected through a sharp real depreciation of the rand and a reduction in absorption.

In 1992 the current account surplus narrowed to the equivalent of 1.5 percent of GDP, compared with 2.5 percent in the previous year, with the change reflecting the drought, and adverse changes in the terms of trade. The volume of total exports increased relative to its 1991 level, but export unit values declined, as a result of lower prices of gold and other metals, thereby keeping the value of total exports roughly constant in U.S. dollar terms (Appendix Tables 23-27). The increase in export volume was attributable to a very strong performance in the manufacturing sector, which more than compensated for reduced exports of agricultural products (owing to the drought) and of gold. 1/ Imports grew strongly in 1992 as a result of a real appreciation of the rand, the high import content of manufactured exports, and grain imports related to the drought. 2/ In the first half of 1993, export volume was 5 percent higher than in the first half of 1992, with the rebound being due to substantial increases in the exports of diamonds, agricultural products, manufactures, and some mining products. Imports continued to grow in the first quarter of 1993, but were lower in the second quarter, reflecting a lesser need for agricultural imports.

Although the moratorium on bank lending to South Africa remained in effect, some private borrowers regained access to international capital markets after 1990. Subsequently, in 1991-92, the Government and major public enterprises also returned to capital markets by launching public bond issues; in the first half of 1992 these issues raised R 2 billion on European markets. During the second half of the year, however, and through the first half of 1993, there were pronounced capital outflows (Appendix Table 28). In the wake of the breakdown of constitutional talks in May 1992, margins offered to South African borrowers doubled, to 3 percentage points, and major public enterprises elected not to roll over debt payments coming due. At the same time, payments began to come due on short-term debt that had been converted to medium-term debt under the first interim arrangement following the debt standstill. Finally, there was a speculative outflow of short-term capital through the adjustments in timing of foreign payments and receipts ("leads and lags"). The combination of these factors resulted in the Reserve Bank using a considerable amount of its external reserves in order to moderate the pace of depreciation of the rand.

The limits on South Africa's access to international capital markets have resulted in a steady lowering of both external indebtedness, which was reduced from more than 40 percent of GDP in late 1985 to 16 percent at end-1992, and the interest ratio, which fell from 10 percent of export earnings to 7 percent during the same period (Appendix Table 29). As for the debt caught in the standstill net ("affected debt"), the partial repayments of

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1/ Gold export volume was slightly lower in 1992 than in 1991 in spite of slightly higher production.

2/ In addition there were some major capital purchases by the national airline.

CHART 7
SOUTH AFRICA

SELECTED BALANCE OF PAYMENTS INDICATORS, 1980-92

IMPORT AND EXPORT VOLUMES
(Indices, 1980=100)

Nongold exports

Total exports

Total imports

EXTERNAL CURRENT ACCOUNT
(In percent of GDP)

Merchandise trade balance

Current account balance

CAPITAL ACCOUNT DEVELOPMENTS
(In percent of GDP)

Total capital account

Private sector
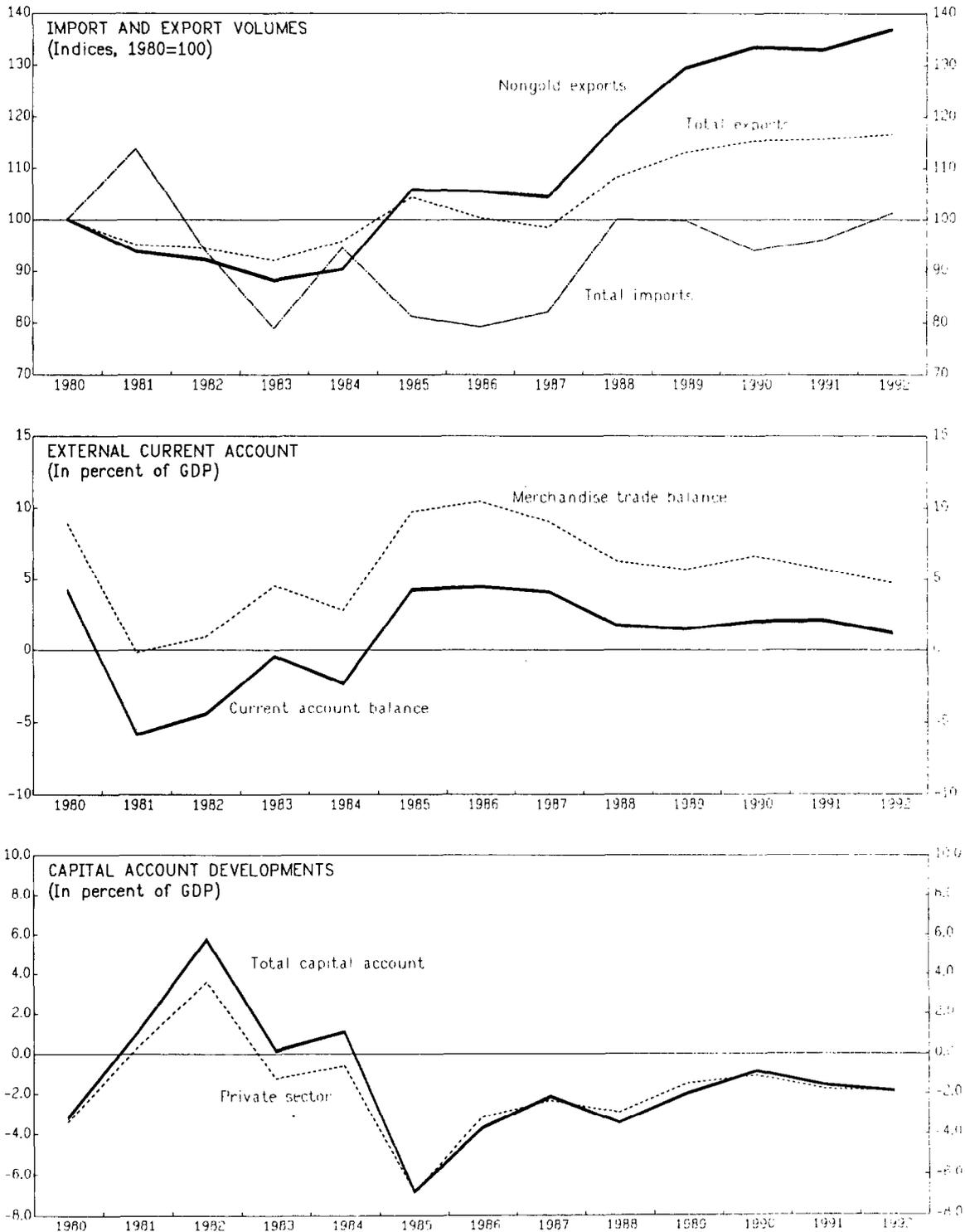
Source: South African Reserve Bank, Quarterly Bulletin.

principal and the use by many creditors of the "exit options" (to convert affected debt into nonaffected longer term debt), contributed to reducing the stock of affected debt from US$14 billion (58 percent of outstanding debt) in August 1985 to US$5.5 billion (less than a third of outstanding debt) at end-1992.

In September 1993, South Africa and its bank creditors concluded the 1994 Debt Arrangements, which specify terms for the normalization of all debt remaining in the standstill net at the end of 1993, when the Third Interim Arrangement expires. This final arrangement provides for the repayment of these debts--an estimated US$5 billion--over eight years. The repayment schedule includes an up-front payment of 10 percent of the affected debt in February 1994. Thereafter, repayments are backloaded: smaller repayments are due from August 1994 through 1998, and larger repayments (about US$1 billion each year) come due during the last three years of the arrangements. The agreement retains exit options that had been available under the Third Interim Arrangement.

The SARB accumulated foreign exchange reserves steadily from mid-1990 through late 1992; gross official reserves rose from US$2.1 billion in December 1989 to a peak of US$4.2 billion in August 1992, representing 2½-3 months of import cover (Appendix Table 30). Subsequently, an increase in imports and a weakening of the capital account caused gross reserves to fall to US$3 billion in December and to a little under US$2 billion (less than six weeks of imports) by September 1993. The loss would have been even greater if the Reserve Bank had not begun in December 1992 to draw on its credit lines at foreign banks in order to maintain reasonable import cover: short-term liabilities rose from zero in August 1992 to US$0.8 billion in September 1993.

While South Africa's external competitiveness was improved by the large devaluations in 1984-85, this gain was eroded by a steady appreciation in the real effective value of the rand through 1992 (Appendix Table 31). Indeed, a variety of indices would suggest that relative price movements have reduced the incentive to produce for export or import substitution and encouraged a shift in consumption toward imports (Appendix Table 32). 1/ Non-gold export prices deteriorated relative to the various indices of domestic and input costs, by 10-40 percent between 1985 and mid-1993. 2/ Higher import taxes (through excises as well as import surcharges) offset some of the incentive to import but domestic costs and prices nonetheless rose faster than import prices.

1/ The discrepancies between the two real exchange rate indices shown in the tables reflect in part different baskets of currencies used in the calculations.

2/ Subsidies through the General Export Incentive Scheme (GEIS) and other export promotion measures improved the profitability of the export sector compared with what is shown by these indices, but the trend in profit margins was not conducive to investment in export production.

During 1992 the rand (commercial exchange rate) depreciated by close to 8 percent against the U.S. dollar. This was only 4 percent in nominal effective terms, since the dollar appreciated against the currencies of South Africa's major trading partners. In view of South Africa's high inflation relative to partner countries, the real effective exchange rate appreciated further in 1992. The first nine months of 1993 saw a significant depreciation of the rand--by 11 percent against the U.S. dollar and 9 percent in nominal effective terms. This more rapid depreciation, combined with consumer price inflation that remained at about 9 percent a year, gave rise to a 3.4 percent depreciation in real effective terms.

The financial rand discount, a closely watched index of the economic impact of political developments, was generally larger in 1992 and 1993 than the low levels attained in 1991. In June 1992, after the interruption of constitutional talks, the discount widened from 18 percent to 25 percent and by year-end it was nearly 40 percent. In April 1993 the discount rose sharply after the assassination of Chris Hani, a key figure in the African National Congress alliance. The discount narrowed to about 30 percent after the assassination failed to derail the constitutional talks and narrowed further to about 20 percent in the wake of the passage by Parliament of the bill establishing a Transitional Executive Council (TEC) and the lifting of sanctions by the United Nations.

5. Further analysis

The most pressing problem of the South African economy is how to create enough jobs, not only for those now unemployed but also for entrants into a labor force that is growing at an estimated 2.7 percent a year. Chapter II of this report argues that much of South Africa's unemployment is structural rather than cyclical and is, therefore, not amenable to solution by short-term demand management. A durable reduction in unemployment will require some combination of increased investment, increased labor productivity, and more flexibility in the labor market.

A second issue that will require the immediate attention of the new Government is fiscal policy. It will be critically important to ensure that the fiscal stance is sustainable in the medium term and does not entail an excessive claim on resources in the short term. Chapter III shows that the margin for maneuver is extremely narrow, even after correcting for cyclical factors that contribute to the current deficit. While there is not much scope to raise taxes, there will be mounting pressure for increased social spending. Yet even at its present level, the deficit puts fiscal sustainability at risk. A stylized supply-side model is used to show how an unsustainable fiscal position can reduce private investment and growth.

In Chapter IV, the pieces of the puzzle are put together in the context of a simple macroeconomic model of the South African economy. Alternative scenarios lay emphasis on the importance of the saving-investment balance and on the need for sustainable fiscal policies. In addition, the model highlights the interplay between investment ratios and real wages in

strategies aimed at generating sufficient growth to reduce unemployment and raise per capita income.

The external sector will play a key role in any growth path envisaged for South Africa. After decades of trade sanctions and seven years of financial sanctions, South Africa is poised to re-enter international markets. In this regard it will be important to maintain an exchange and trade system that is as transparent and nondistorting as possible. Chapters V and VI deal with these areas: Chapter V examines the nature and functioning of the financial rand system and Chapter VI discusses the trade system, with special attention to the proposed liberalization that is seen as a part of the post-apartheid economic program. Finally, given that the South African economy is a dominant force in the region, Chapter VII provides an account of its influence on neighboring countries and of the regional organizations in which South Africa plays a role.

II. <u>Disequilibrium in the Labor Market</u>

1. <u>Introduction</u>

The labor market in South Africa can be viewed as two independent, though closely related, factor markets: one for skilled labor and the other for unskilled labor. Beside the wage differential between skilled and unskilled labor, there is an apparent asymmetry in the mechanisms by which the two factor markets equilibrate. <u>1</u>/

Until recently there was virtually no unemployment of skilled labor and even now, when unemployment has appeared, the level is low enough to be consistent with frictional explanations. <u>2</u>/ Furthermore, real wages of skilled labor have apparently declined during the recession, indicating a flexible real wage for skilled labor. In summary, the market for skilled labor appears to clear, with real wages adjusting to equilibrate demand and a relatively inelastic supply in a classical manner. In the market for unskilled labor, however, there is, by any definition, a large amount of unemployment, with estimates varying between 20 percent and 50 percent. Therefore, while profit maximization objectives would suggest that firms are on their demand curves for labor, indications are that market equilibrium is not occurring anywhere near a full-employment wage.

Section 2 develops a simple aggregative framework for the economy that permits quantitative characterization of the market for unskilled labor. The employment gap in the market is decomposed into a cyclical component that can be identified with deficient aggregate demand and a structural component that can be identified with aggregate supply. The estimates suggest that unemployment is largely structural rather than cyclical, and that real wage levels are the binding constraint on employment.

Section 3 explores alternative explanations for the persistence of deviations of market wages from full-employment levels. Three models are discussed: a nutrition-efficiency-wage model, a wage-incentive model, and a model of collective bargaining. Each is shown to be empirically capable of generating the kind of wage gap observed in the market for unskilled labor in South Africa. At an aggregative level the models are, therefore, observationally equivalent. In any given sector, however, one of the models is likely to be more relevant than the others, as the economy comprises various sectors that differ in the average levels of wages, industrial structure, and the extent of unionization. At the macroeconomic level, it

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<u>1</u>/ Skilled labor is interpreted in this paper as labor classified as possessing "high-level" skills (see Annex I). In 1989 it comprised about 15 percent of the labor force in the non-primary sector.

<u>2</u>/ Indications are that unemployment within the highly skilled labor market began to appear only in 1985, coinciding with the imposition of sanctions.

is useful to examine the different models because they stress alternative factors in creating a wage gap and thus unemployment.

The predictions of the models for wages and employment are discussed in light of recent and prospective developments in South Africa. First, since the empirical work suggests that the market-clearing wage is at or below the subsistence level, a natural model to consider is the nutritional model of Leibenstein (1957). The analysis suggests that to the extent that the redistribution of social expenditures toward the nonwhite population that is under way in South Africa succeeds in raising the nonwage income of unskilled labor, the market wage will decline and employment will expand. A reduction in effective transportation costs, which were a significant burden imposed by apartheid on workers, would have a similar effect. The model predicts that improvements in labor productivity stemming from factors that are external to workers' effort, such as increases in physical capital and multifactor productivity, would be reflected primarily in increases in employment rather than in wages.

Second, a wage-incentive model that follows that of Shapiro and Stiglitz (1984) is discussed. The model suggests that increases in labor supply, reductions in labor separation rates with the abatement of the recession, improvements in the motivation of the labor force with declines in political unrest, and structural measures that increase labor market flexibility should all lead to lower product wages and prompt an expansion in employment. Improvements in labor productivity that are due to increases in the capital stock or multifactor productivity should be accompanied by increases in wages and employment.

Third, a model of collective bargaining between employers and a union that follows the work of McDonald and Solow (1981) is discussed. It is argued that to the extent that unions have been responsible for creating a wage gap and lowering employment, and since union density in the private business sector is already very high, union membership--and therefore strength--is likely to decline over time. To the extent that trade unions or federations of trade unions, such as the Congress of South African Trade Unions (COSATU), have broader political agendas, concerns about the size of the membership are likely to increase over time. This could shift their objective functions in favor of employment at the expense of wages.

2.   A macroeconomic characterization of wages, employment, and unemployment

A simple aggregative framework relating output (value added) to three factors of production--unskilled labor, skilled labor, and physical capital--is used to characterize production. Skilled labor and unskilled labor are assumed to be combined using a constant elasticity of substitution (CES) function to produce what is termed "effective" labor. Effective labor then combines with physical capital through a CES production function to yield output. These functions can be written as

$$Q = A[a(L \cdot \exp(\lambda_1 t))^{\rho_1} + (1-a)K^{\rho_1}]^{\frac{1}{\rho_1}} \qquad (1)$$

$$L = B[b(LS)^{\rho_2} + (1-b)(LU)^{\rho_2}]^{\frac{1}{\rho_2}} \qquad\qquad (2)$$

where Q denotes output, L denotes effective labor, K denotes physical capital, and LS and LU denote, respectively, skilled and unskilled labor; a, b, A and B are constants with a and b restricted to having values between 0 and 1. Since L is not observable, the constant B simply represents a choice of units in which L is measured and has been normalized to unity. The term $\exp(\lambda_1 t)$ allows for labor-augmenting technical progress. The ρ_is are parameters that determine the elasticity of substitution, σ_i, between effective labor and capital, and between skilled and unskilled labor, respectively, by the relationship

$$\sigma_i = \frac{1}{1 - \rho_i} \, . \qquad\qquad (3)$$

a.   The demand for unskilled labor

First order conditions for profit maximization require that the marginal product of unskilled labor be equated with its real product wage. This defines the demand for unskilled labor as a function of the real product wage for given levels of the state of technology, physical capital, and skilled labor employed. If the stock of physical capital and skilled labor are assumed to be predetermined at a point in time in that they can only be adjusted slowly, 1/ then, given the assumption of diminishing returns to labor, there will exist a well-defined downward sloping demand curve for labor. Such a curve is plotted in Figure 1, where LU^d denotes the demand curve for unskilled labor and LU_f represents the full-employment level. 2/ The intersection of the two curves defines a full-employment wage, WU_f.

If, for any reason, the real wage exceeded the full-employment wage, but firms continued to operate on their demand curve, e.g., at point Y on Figure 1, then there would be unemployment of LU_f - LU_c, and a "classical" wage gap can be defined as the difference between the prevailing wage WU_1 and the full employment wage WU_f.

Of course firms need not always be on their labor demand curve. Consider the case where aggregate demand falls short of aggregate supply at the prevailing wage. Substitution of the firm's labor demand curve into the production function yields an output-supply curve that is, like the labor demand curve, a decreasing function of the real wage. At the prevailing real wage, if aggregate demand falls short of firms' desired aggregate supply, for the output market to clear, firms will have to be off their

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1/ For the economy as a whole, this is of course always true if the markets for the rental of capital and skilled labor each clear. The demand function for unskilled labor can then be expressed as a function of the full employment levels of the capital stock and skilled labor.

2/ The following discussion draws on Lipschitz and Schadler (1984).

supply curve. Correspondingly, the firm will be off its labor demand curve. Deficient aggregate demand could thus move the economy to a point such as X in Figure 1 with unemployment exceeding that due to a classical

Figure 1. The Demand for Unskilled Labor.
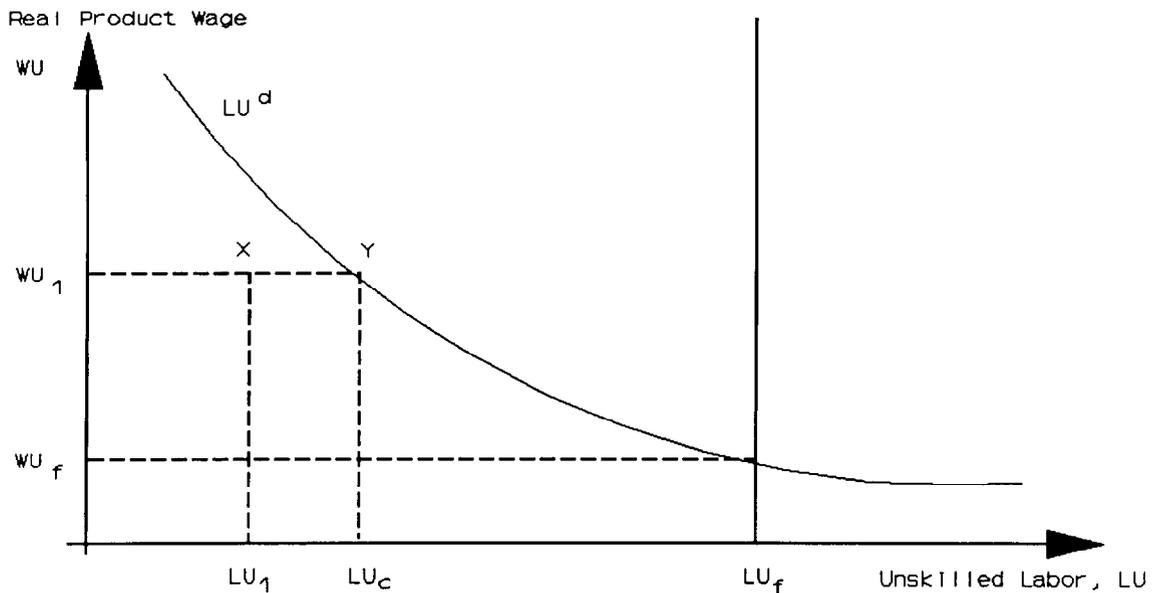
wage gap. This additional unemployment, (LU_c-LU_1) in Figure 1, is often termed "Keynesian" in that an expansion in aggregate demand can be expected to raise employment without requiring an adjustment in real wages. If aggregate demand were to exceed aggregate supply at the prevailing wage, however, real wages become a binding constraint. Firms will not be willing to increase the supply of output unless real wages decline.

In the ensuing analysis, unemployment in South Africa is decomposed into a Keynesian component that can be identified with deficient aggregate demand and a classical component that can be identified with aggregate supply.

Taking a log-linear approximation, the wage gap can be written as 1/

$$wu_g = wu - wu_f = \left(\frac{1}{\epsilon_{WU}^{LU}} \right) (lu_f - lu) \tag{5}$$

where lower case wu and lu are used to denote the logarithms of real wages and employment and where ϵ_{WU}^{LU} denotes the elasticity of demand for unskilled labor with respect to the real product wage. On the basis of equations (1) and (2), the first order condition for the employment of unskilled labor implies that ϵ_{WU}^{LU} is given by:

$$\epsilon_{WU}^{LU} = \frac{d \ln(LU)}{d \ln(WU)} = - \frac{1}{\frac{1}{\sigma_1} (1 - \alpha_L) \epsilon_{LU}^{L} + \frac{1}{\sigma_2} (1 - \epsilon_{LU}^{L})} \tag{4}$$

where α_L denotes labor's share in income and ϵ_{LU}^{L} denotes the elasticity of effective labor with respect to the input of unskilled labor.

To estimate the wage gap it is necessary to parameterize (1) and (2). This is done in the next two subsections. In principle, one would want to estimate the production function directly. Unfortunately, there are several well-known technical problems in doing this. The approach followed here is to carry out econometric estimation only where necessary. Where possible the functions are parameterized on the basis of available data for a particular base year. The present framework departs from standard production functions employing aggregate labor and capital by drawing the distinction between skilled and unskilled labor. Since little is known a priori about the substitutability between skilled and unskilled labor, and effective labor input is an unobservable variable, parameters of the effective labor function are estimated in the next subsection. Using the estimated series for effective labor input, the aggregate production function is then parameterized on the basis of data for a base year, 1989, and what appears to be a realistic value for the elasticity of substitution between labor and capital on the basis of published estimates. 2/

1/ The calculations reported below were also carried out without the log-linear approximation. Since only small differences were found--of about ½ of one percent for changes of 20 percent implied by the log-linear approximation--the log-linear approximations are reported to maintain transparency of the calculations.

2/ 1989 is chosen as the base year to coincide with the last year of the sample period in estimating the effective labor function. The reasons for the choice of sample period in estimation are indicated in the next subsection.

b. ## The effective labor function

Ideally, estimates of σ_2 (that is $1/(1-\rho_2)$) and b in equation (2) would be obtained by estimating the relationship between the ratio of unskilled to skilled workers and their relative wages implied by the first order conditions for profit maximization. However, while data on employment levels by skill category for South Africa are available, data on labor compensation by skill level are not: the compensation data that are available are on a racial basis. The following analysis has adopted the methodology of Bayoumi and Corker (1991) of expressing observed income shares of whites and nonwhites as an estimable function of employment levels of skilled and unskilled whites and nonwhites.

Any analysis employing historical data on labor compensation in South Africa must make allowance for wage differentials between white and non-white wages attributable to the apartheid regime. It is assumed here that, while various forms of apartheid restrictions--such as job reservation--led to wage rates of white labor exceeding those of nonwhite labor in the same skill category, white labor and nonwhite labor were equally productive in that skill category. Following the work of Porter (1978) it is assumed that firms attempted to equate the marginal product of each type of labor with its "effective" real product wage, defined as a weighted average of wages paid to whites and nonwhites. For any skill category of labor, the firm's first order condition is then

$$\frac{\partial Q}{\partial (L_E + L_N)} = W = c \cdot W_E + (1-c) \cdot W_N \tag{6}$$

where the subscripts E and N are used to denote white and nonwhite, respectively. The weight c represents the ratio of white to total employment for that skill category. The wage differential between white and nonwhite labor for any particular skill category is modeled as an exogenous function of time, so that

$$W_E = (1 + \beta_1 \cdot \exp(-\beta_2 t)) W_N \tag{7}$$

where the parameter β_1 measures the level of the discriminatory wage differential in the base year (when $t = 0$) and β_2 is the rate at which the wage differential erodes over time. 1/ It is further assumed that the extent of wage discrimination is the same across skill categories, so that β_1 and β_2 are constrained to be the same across skill categories. The white share of labor income can be described by the identity:

$$\alpha_E = \frac{LS_E \cdot WS_E}{Q} + \frac{LU_E \cdot WU_E}{Q} = \frac{LS_E \cdot WS_E}{LS \cdot WS} \alpha_S + \frac{LU_E \cdot WU_E}{LU \cdot WU} \alpha_U \tag{8}$$

where α_S and α_U represent the shares of skilled and unskilled labor in income. Given the CES nature of the effective labor function, if firms are

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1/ This description is an approximation. Formally, β_2 represents the log-difference of the wage differential.

on their labor demand curves, the ratio of the factor shares of skilled and unskilled labor can be expressed as

$$\frac{\alpha_S}{\alpha_U} = \frac{b}{1-b}\left[\frac{LS}{LU}\right]^{\frac{\sigma_2-1}{\sigma_2}} .$$ (9)

Substituting (7) into (6), and then the resulting expression and (9) into equation (8), and making similar substitutions into the definition of the share of nonwhite labor income, the ratio of white to nonwhite labor income shares can be expressed as:

$$\frac{\alpha_E}{\alpha_N} = (1+\beta_1 \cdot exp(-\beta_2 t)) \left[\frac{\dfrac{(LS_E/LS)(LS/LU)^{\sigma^* } b^*}{(1+(LS_E/LS)\beta_1 \cdot exp(-\beta_2 t))} + \dfrac{(LU_N/LU)}{(1+(LU_E/LU)\beta_1 \cdot exp(-\beta_2 t))}}{\dfrac{(LS_N/LS)(LS/LU)^{\sigma^* } b^*}{(1+(LS_E/LS)\beta_1 \cdot exp(-\beta_2 t))} + \dfrac{(LU_N/LU)}{(1+(LU_E/LU)\beta_1 \cdot exp(-\beta_2 t))}} \right]$$ (10)

where $\sigma^* = (\sigma_2-1)/\sigma_2$ and $b^* = 1/(1-b)$. Equation (10) was estimated using nonlinear least squares with data on remuneration by racial group and employment by skill category and racial group for the period 1970-89 for the nonprimary sector. [1] Results are reported in Table 2.

Table 2. South Africa: Parameter estimates
from factor share equation

	Value	Standard Error
σ^*	0.36	0.39
b^*	2.19	1.53
β_1	0.29	0.13
β_2	0.10	0.02

Durbin-Watson = 1.24 R^2 = 0.98

Note: The estimation period was 1970-89. t was arbitrarily set equal to zero in 1985 so that estimates for β_1 could be compared to those of McGrath (1990), Knight and McGrath (1987), and Bayoumi and Corker (1991).

The coefficients related to the effective labor function, σ^* and b^*, are somewhat imprecisely estimated. Given the indirect route necessary to

[1] Data sources and definitions are discussed in Annex I. The reason for the choice of sample period is that employment by race and skill category were reported up to 1989; thereafter, employment by skill category seems no longer to be broken down by racial group, making the methodology used here inapplicable. Further, the formal removal of apartheid in 1989 would suggest a structural break in equation (10).

estimate them, this is not surprising. Since these are the only estimates available, however, they are employed below. The estimate of σ^* implies an elasticity of substitution between skilled and unskilled labor of 1.56. The fact that this elasticity is estimated to be greater than unity implies that a change in the composition of the employed workforce in favor of skilled labor--as has occurred in South Africa--will be associated with a less than proportionate decline in the relative wage of skilled labor (approximately two thirds of the percentage change in the ratio of skilled to unskilled labor). The estimate of b^* implies an estimate for b in equation (2) of 0.69. Using these estimates, a series for effective labor was constructed and the elasticity of effective labor with respect to unskilled labor, which also represents unskilled labor's contribution to effective labor input, was found to be 0.46. The above estimates imply that the marginal product of skilled labor was 6.83 times that of unskilled labor in 1989 and therefore a large wage differential should exist between skilled and unskilled labor.

The coefficients related to the wage differential between white and nonwhite wages within a skill category imply a level difference in 1985 of 29 percent. While the estimate here is somewhat higher than that of Bayoumi and Corker (1991) of 22 percent, and that of Knight and McGrath (1987) of 21 percent using microeconomic data for the same year, the estimate is comparable. The estimate of β_2 implies that this differential declined by an average of 10 percent per annum over the sample period. Projecting beyond the sample period, these estimates imply that the discrimination wage wedge should have declined to around 13 percent by 1993. However, it is likely that even this relatively small differential overstates the present wedge, given the likely acceleration in the erosion of the discriminatory differential with the formal removal of apartheid in 1989.

c. **The aggregate production function and the wage gap**

For purposes of calculating the classical wage gap for unskilled labor, an estimate of the elasticity of substitution between labor and capital and the share of labor in total income is required. The elasticity of substitution between capital and effective labor input is assumed to be 0.5. This value is at the low end of the range of 0.5 to 0.8 found by Artus (1984) for the major industrial countries to which South Africa compares in terms of capital intensity as measured by the capital-output ratio. 1/ It is somewhat higher than Fallon's (1992) estimates of between 0.2 and 0.25 for the elasticity of substitution between capital and unskilled and semi-skilled labor, respectively.

The share of labor income in the nonprimary sector is estimated to be 65 percent in 1989. Using the estimated effective labor series, the share of labor income in output, and the assumed elasticity of substitution

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1/ The capital-output ratio in the nonprimary sector of South Africa is estimated at around 3.7 in 1989, compared to around 3 in the United States (Adams and Chadha, 1992) and 3.9 for Germany (McDonald and Thumann, 1990).

between capital and labor, it is possible to parameterize the production function for any given year under the assumption that the output market clears. This is done in Table 3, which presents some basic data on the South African economy. Using the parameter values in Table 3 and the estimates in Table 2, the point estimate for the elasticity of the demand for unskilled labor with respect to the real product wage in equation (5) is -1.5. This implies that the wage gap (in logarithms) is some two thirds of the employment gap, that is:

$$wu - wu_f = \frac{2}{3}[lu_f - lu]$$

The National Manpower Commission estimates that of a total population (including the ten homelands) of 39.4 million people in 1991, 13.4 million were economically active. 1/ In accordance with international conventions, the labor force is defined as the economically active population. It should be noted, however, that such a definition may considerably underestimate the labor force since current measured participation rates for males in the labor force are very low relative both to international standards and to past rates. The labor force participation rate of males in the working age group of 15-65 declined from 93 percent in 1960 to 74 percent in 1991. 2/ Of the economically active population, 8 million were employed in the formal sector, of which 6.3 million were in the nonprimary sector. Of the remaining 5.4 million, 2.8 million are estimated to earn a living in the informal sector while 2.6 million were unemployed.

Measuring the employment gap for the formal nonprimary sector is complicated by how those employed in the large informal sector should be treated. It is important to note that the statistics available on the informal sector include a wide range of activities. Some informal sector activities are equivalent in pay--if not superior, in an after-tax sense--to those in the formal sector. A well-known and much-discussed example is the taxi industry, which has mushroomed over the last few years. 3/ Official estimates of informal sector activity, however, also include activities such as "scavenging," which provide a "wage" well below subsistence. 4/ In the following analysis, two employment gap measures are used by treating those reported to be employed in the informal sector alternatively as fully employed and completely unemployed. The associated classical wage gaps can then be interpreted, respectively, as the decline in wages necessary in the formal nonprimary sector to potentially absorb the current unemployed, and

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1/ See Race Relations Survey (1993).
2/ See Barker (1992).
3/ Khosa (1990) estimates that while there were 40,000 licensed taxis in South Africa in 1988, there were 80,000 "pirate" taxis.
4/ According to a Central Statistical Service (1990) survey, the major activities were trading and hawking (25 percent) and crafts (33 percent).

Table 3.   South Africa: Basic Data and Parameterization of Production Function

(In 1989)

Total economy

Gross domestic product, factor cost (in millions of rand)	207,716
Net capital stock (in millions of rand)	675,248

Nonprimary sector

Gross domestic product, factor cost (in millions of rand)	171,485
Net capital stock (in millions of rand)	603,715
Gross compensation of labor (in millions of rand)	111,465
Gross compensation of capital (in millions of rand)	60,020

Employment in the nonprimary sector (number of people)

Skilled labor	880,051
Of which:	
white	(566,355)
Unskilled labor	5,187,070
Of which:	
white	(1,175,805)
Effective labor input	1,747,380

Production function parameters for the nonprimary sector on the basis of 1989 data

Parameter "a"	0.84
Parameter "A"	0.13

Capacity utilization rate in manufacturing

	1981	1989	1991
Reported (in percent)	86.4	84.5	81
Index 1/	1.0	0.98	0.94

1/   The maximum reported utilization rate during 1970-92 was in 1981.

that necessary to absorb both the unemployed and those employed in the informal sector.

The imposition of sanctions in 1985 and the recession in the industrial countries in the late 1980s generated a protracted recession for the South African economy. It is important, therefore, to distinguish between the recessionary or cyclical component of the employment gap, which may be expected to be closed once the recession dissipates without requiring an adjustment in real wages, and the classical employment gap, which is associated with the real wage exceeding the full-employment wage. If one were estimating the demand for unskilled labor, as depicted in Figure 1 this could be accomplished by including a cyclical indicator--such as capacity utilization--that provides a measure of the extent to which firms are off the labor demand curve corresponding to full utilization of the capital stock. This methodology is employed by, for example, Lipschitz and Schadler (1984) and here a very similar approach is followed. Note that the demand curve for unskilled labor in Figure 1 was drawn for a fixed level of the capital stock. Changes in the capital stock shift the demand curve for labor. In particular, decreases in either the capital stock or the extent of utilization of a fixed stock would shift LU^d horizontally to the left. In decomposing the employment gap into cyclical and classical components, it is assumed that in response to deficient aggregate demand, firms are unable to change the level of their capital stock in the short run, but can vary its utilization rate. For any observed utilization rate below the maximum, the labor demand curve in Figure 1 can be viewed as having shifted to the left of that defined by the maximum utilization rate. The horizontal difference between the labor demand curve defined by the current utilization rate and that defined by the maximum utilization rate can, at any wage rate, then be identified as the cyclical employment gap. In Table 4 the capacity utilization rate in manufacturing (reported in Table 3) has been used as a proxy for the rate of capital utilization in the nonprimary sector. For 1991, capital utilization is estimated to be 94 percent of its maximum. 1/ The shift in the demand for unskilled labor for a given change in the capital utilization rate can be determined by differentiating the firm's demand curve for unskilled labor with respect to the capital stock at any wage rate. Expressed in elasticity form:

$$\frac{\partial LU}{\partial K} \frac{K}{LU} = \frac{1}{\sigma_1} (-\epsilon_{WU}^{LU}) (1-a) A^{\frac{\sigma_1-1}{\sigma_1}} (\frac{K}{Q})^{\frac{\sigma_1-1}{\sigma_1}} \qquad (11)$$

so that, as a log-linear approximation, for the parameter values reported above, the increase in employment that can be expected from an increase in the capital utilization rate (denoted k) to its maximum is:

$$lu_c - lu = 1.05[k_f - k]$$

1/ The capacity utilization rate declined further in 1992 to about 91 percent of maximum. If a 91 percent utilization rate were assumed, the component of the gap reported would increase from 0.36 million to 0.56 million.

Table 4. South Africa: Employment Gaps and the Classical Wage Gap for Unskilled Labor
in the Nonprimary Sector, 1991

Full Employment Definition	Current employment (millions)	Full employment (millions)	Employment gaps		Classical wage gap
			Cyclical	Classical	
Narrow 1/	5.4	8.0	0.36	2.24	19.7
Broad 1/	5.4	10.8	0.36	5.04	34.2

1/ The "narrow" definition of full employment includes the employed and the unemployed. The "broad" definition includes also those employed in the informal sector.

Table 4 indicates that around 0.36 million of the employment gap in 1991 could be attributed to cyclical factors and could be expected to disappear as the recession abates. However, the remaining, and more substantial, classical employment gap of between 2.2 million and 5 million-- depending on whether informal sector employment is counted as unemployment-- is likely to persist in the absence of changes in real wages of unskilled labor. It is estimated that wages of unskilled labor would need to be 20-34 percent lower for full employment to prevail.

Table 5 compares the estimated average wage of unskilled labor in the nonprimary sectors with alternative concepts of the classical full-employment wage, an estimated household subsistence level, and estimated average wage income in the informal sector. While the narrow definition of the classical employment gap implies a full-employment wage that exceeds the subsistence wage by some 22 percent, the broader definition implies a full-employment wage that is below the subsistence level. Estimated average remuneration in the informal sector barely exceeds the subsistence level. In summary, unemployment appears to be largely structural and associated with supply factors rather than due to cyclical factors associated with deficient demand. Furthermore, for the formal nonprimary sector to absorb the portion of the labor force that is outside the formal sector the wage would need to fall to, or slightly below, the subsistence level. The source of alternative employment--the informal sector--appears to offer the subsistence wage on average.

3. Equilibrium explanations of the classical wage gap

This section comprises a discussion of three models that are potentially capable of explaining persistent deviations of wages from their full-employment levels: a nutrition-efficiency-wage model; a wage-incentive model; and a model of a monopoly union that bargains collectively with employers. The empirical ability of the models in explaining wage gaps of

Table 5.   South Africa: Estimated Wages and Wage Gaps, 1991

(In rand per month)

	1991	Percent below market wage
Average gross remuneration of unskilled labor (market wage) 1/	1,048	--
Classical full-employment wage 2/	842	20
Classical full-employment wage 2/ (including informal sector)	690	34
Average household subsistence level 3/	697	33
Average remuneration in informal sector 4/	717	32

1/ Estimated income share of unskilled labor per worker in the nonprimary sector.

2/ Calculated on the basis of percentages reported in Table 4.

3/ Based on a September 1991 household survey (see Race Relations Survey (1993)) for an average family.

4/ Informal sector output is assumed to be 10 percent of GDP in 1991. The Central Statistical Service (1990) survey reported output to be 8 percent of GDP in 1989. Since this is a highly labor-intensive sector, it was assumed that labor's share of income in the sector was 90 percent.

the magnitude observed in the market for unskilled labor in South Africa are examined.

Throughout the section it is assumed that there are diminishing returns to labor and that labor supply is perfectly elastic at a fixed real reservation wage, denoted $\bar{W}$. In the nutrition model, this reservation wage could be identified with the subsistence wage. In the wage-incentive and union models, $\bar{W}$ can be thought of as the alternative income labor can earn when not employed in the formal sector. In keeping with the empirical characterization of the market for unskilled labor in Tables 3 and 4, wages and parameters are measured at a monthly frequency, except where explicitly noted.

a.   **The nutrition model**

The nutrition-efficiency-wage model is based on the idea that at low levels of income there is a biologically determined relationship between nutrition and labor productivity (Leibenstein (1957), Mirrlees (1975) and Bliss and Stern (1978)). The most straightforward way to capture this link in a macroeconomic model is to assume that all wage and nonwage income is consumed and posit that worker productivity or "effort" is an increasing function of income. 1/ Firms will then offer wage rates to workers taking into account the effects of compensation on worker productivity.

Let e(W + NW) denote worker effort as a function of labor income, W, and non-wage income, NW. For simplicity, assume further that the effort function is concave so that, while worker effort increases with income, it does so at a diminishing rate. Firms, in maximizing profits, will minimize wage costs per unit of effective labor input. That is, they will minimize

$$\frac{W \cdot L}{e(W + NW) \cdot L} = \frac{W}{e(W + NW)} , \tag{12}$$

with respect to the wage. The cost-minimizing wage or the efficiency-wage, W*, is then determined by the first order condition:

$$\frac{\partial e(W^* + NW)}{\partial W^*} \cdot \frac{W^*}{e(W + NW)} = 1 , \tag{13}$$

where the elasticity of effort with respect to the real wage is unity. Equation (13) implies that for a given level of non-wage income, the efficiency wage is completely rigid. Only factors that directly influence the worker's effort function will have an effect on the efficiency wage. Improvements in labor productivity stemming from factors that are external to the effort function, such as increases in the capital stock or the level of multifactor productivity, will not raise the efficiency wage. These factors will, however, affect employment. The profit maximizing employment

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1/ "Effectiveness" might be a better term. However, we shall continue to use the terminology that is standard in the literature.

level is determined by the traditional condition that the (effective) marginal product of labor equals the (efficiency) wage. An increase in the capital stock or multifactor productivity would, by raising the marginal product of labor, increase the demand for labor. Similarly, factors that lower the efficiency wage would prompt an expansion in employment.

In equilibrium, unemployment will exist if labor demand at the efficiency wage exceeds labor supply. While unemployed workers may be willing to work at a wage lower than the efficiency wage, it is not in the interest of firms to offer a lower wage. A wage cut below the efficiency wage would lower effective labor input sufficiently that the firm would be worse off. A firm would therefore offer W^* since, by definition, there is no wage that yields a lower labor cost.

The efficiency wage--and hence the wage gap and the level of unemployment--is determined entirely by the technical relationship between worker effort and the wage rate, that is, by the parameters of the effort function. While the hypothesis that nutritional status affects labor productivity positively has been tested successfully by, among others, Strauss (1986) and Deolalikar (1988), the state of the art does not permit a general and complete characterization of the effort function. 1/

To illustrate the magnitude of wage gaps predicted by this model, consider a specific example. Strauss (1986) estimates workers' output elasticity with respect to calorie intake for a sample of farm households in Sierra Leone. He finds it to be 0.49 at an average daily energy intake of 1,500 kilo calories, 0.34 at the sample mean of calorie intake, and 0.12 at 4,500 kilo calories. The curvature implied by these estimates can be used to calibrate an effort function of the form $A(W-\tilde{W})^\gamma$, where A is a constant, W is the wage rate, and $\tilde{W}$ represents a subsistence wage. Measuring wages in calories, equating the subsistence wage with a calorie intake of 1,500, and the average with 3,000, an elasticity of 0.34 at the average calorie intake implies a value for γ of 0.17. The efficiency wage can then be calculated to be 21 percent higher than the subsistence level. While workers are willing to work at the subsistence wage, they work so much better at a higher wage that a substantial wage gap can result.

The political transformation under way in South Africa is bringing changes in social benefits and structures that will have an impact on the nonwage income of workers. Changes in nonwage incomes of workers should affect worker effort and therefore the equilibrium efficiency wage. First, social expenditure on education, health, and housing has begun--and is likely to continue--to be redistributed toward the black population. Since this is also the segment that largely comprises unskilled labor, increases in government transfers in such form imply an increase in the average non-

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1/ In addition to estimates of the curvature of the effort function, an estimate of the intercept--that is, worker effort as income (consumption) approaches zero--is necessary. It is unlikely that meaningful observations for such low levels of income can be obtained. In the example that follows, it is assumed that worker effort is positive only once the wage exceeds the subsistence level.

wage income of such workers. Van der Berg's (1992) recent work, for example, shows that, an equalization of social expenditures across racial groups while holding the central government's social expenditure constant as a proportion of GDP, would imply a modest increase in black income after taxes and transfers. Caution needs to be exercised, however, in using these numbers in the present context. To the extent that increased education spending, for example, succeeds in putting people into school who currently or recently have not been in school, such expenditure will not necessarily represent an increase in nonwage income at the individual level. Similar considerations apply to housing, where a sizable segment of the population has not been paying rent. Clearly, however, while the magnitude of the redistribution of social expenditures may overstate the effective increase of nonwage income of employed workers, the direction of change seems less debatable. Second, the locational separation of races required by apartheid often entailed significant transportation time and cost for unskilled labor in getting to work. As workers begin to live closer to the work place, there should be a decline in transportation costs. The effects are equivalent to an increase in nonwage income in the model.

It is straightforward to show that the efficiency-wage will decline in response to an increase in nonwage income, and labor demand, and hence employment should expand.

b.   The wage-incentive model

To establish essential features of the Shapiro and Stiglitz (1984) wage-incentive model, consider an economy inhabited by N infinitely lived risk-neutral identical workers. A worker can be either employed in a competitive industrial sector or unemployed. An employed worker earns a real wage, W, and must decide whether to actually work, and expend effort e, or simply shirk. The flow of utility of an employed worker who is not shirking is assumed, for simplicity, to be given by (W - e), where effort can take on either a constant value e or is zero. To capture the fact that there is labor turnover, it is assumed that all employed workers face an exogenous separation probability, b. The firm can only monitor worker performance imperfectly, so there is a probability, q, that a worker who is shirking gets caught. If a worker is caught shirking he is fired. An unemployed worker earns a fixed real amount, $\bar{W}$ 1/, and faces a probability, δ_t, of obtaining a job.

In equilibrium, to obtain positive effective labor input, the firm must pay a wage such that, for a worker, the expected present value of utility from expending effort on the job exceeds that from shirking, and thus workers have an incentive not to shirk. Annex II shows that this condition is

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1/ $\bar{W}$ in principle represents a host of factors, such as unemployment benefits, self-employed income, and household production activities.

$$W_t = \overline{W} + e + \frac{e}{q} (\rho + b + \delta_t) \qquad , \qquad (14)$$

which can be called the No Shirking Condition (NSC). The NSC represents the minimum wage that firms must pay in order to provide workers with an incentive to expend effort. The NSC shows that the wage paid to workers exceeds the alternative wage by a term that compensates workers for their effort and for a premium. The premium is an increasing function of the exogenous separation probability, b, and the probability of re-employment, δ_t, and a decreasing function of the probability that a shirking worker is caught and fired, q.

In a steady state, the outflow of workers from firms because of turnover will equal gross new hires from the pool of unemployed workers. The parameter δ_t is then constant and given by:

$$\delta = \frac{bL}{U} = \frac{bL}{N-L} \quad . \qquad (15)$$

Substituting (15) into (14), the NSC can be graphed as in Figure 2. Market equilibrium occurs at point Y where the firm is on its (classical) labor demand curve, determined by the marginal product of labor, subject to the NSC constraint. Note that the NSC converges to a positive number that exceeds $\overline{W}$ as employment goes to zero, and approaches infinity as employment approaches total labor supply, N. Consequently, equilibrium always entails some unemployment.

Consider the role that worker effort or disutility from working plays in the NSC. Taken literally, this role is likely to be "small" for most occupations since in the model it represents the additional disutility from working after showing up for work and staying on the job. Except in physically demanding occupations, it is unlikely to be more than 5 percent of the alternative or subsistence wage. The parameter e can be used, however, to capture a host of other factors relevant to performance on the job. Two of these seem particularly relevant in the context of the South African unskilled labor force. Firstly, e can be used to represent the motivation of the labor force. In light of the political and social history of apartheid, worker disutility from performing on the job in an environment that was perceived to be unfair and uncertain could be substantial. Secondly, e can be used to capture the employers' perceived probability that workers will strike or that they will "stay away" during a time of general unrest. These factors can lead to a substantially greater wage gap than is suggested by interpreting e narrowly as the literal disutility of worker effort on the job.

Labor turnover statistics for South Africa, which are available on a monthly basis for certain sectors of the economy, can be used to determine

Figure 2. The Wage Incentive Model.
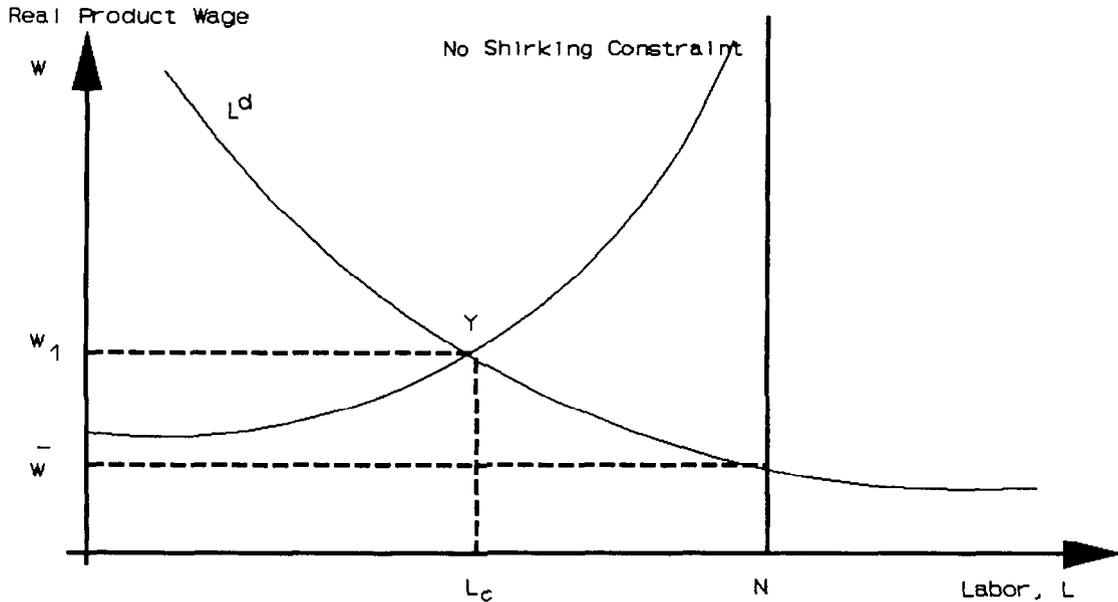
parameter values for the model. 1/ The probability of being hired, δ, calculated as the ratio of gross hires to unemployment (in the nonprimary sector) is 3.5 percent. 2/ Labor separation rates, which include discharges and resignations, are reported to be 1.8 percent in manufacturing and 3.9 percent in construction in 1991. There are some peculiarities in the reported separation rate series for the manufacturing sector. 3/ A point estimate of 3 percent is, therefore, taken as representative for the economy.

The imperfect ability of firms to monitor the performance of their employees is captured by the parameter q, which represents the probability that a worker who shirks gets caught. In principle, one would expect this to be high in a modern economy where supervisors and managers oversee employees. Note, however, that the model assumes that a worker who gets caught shirking is immediately and costlessly fired. In reality the ability of firms to fire workers is likely to be less than perfect. Moreover, a decision to fire a worker often takes time to be implemented and usually

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1/ See South African Labor Statistics (1991).

2/ Calculated as the employed unskilled labor force of 5.4 million in the nonprimary sector in 1991, multiplied by the hiring rate of 1.7 percent, and divided by 2.6 million unemployed (see Table 4).

3/ In particular, a secular decline from 1970 to 1991 is reported for the separation rate in manufacturing. A possible explanation is that the statistics do not accurately capture job losses that are due to firm closures.

entails some cost such as severance pay. 1/ Interpreting q as the joint probability that a poor performer is caught and fired during a year, we consider values for q of 22 percent and 46 percent. These probabilities imply values for q of 2 percent and 5 percent at a monthly frequency.

Employing the parameter values discussed above--a disutility of effort of 5 percent of the subsistence wage; a separation rate of 3 percent; an accession rate of 3.5 percent--and a monthly discount rate of 1 percent, the NSC can yield substantial wage premia over the alternative wage. If the probability of a poor performer being detected and fired during a year is about one half (46 percent) the premium is 11 percent. With a probability of about a one fifth (22 percent), the premium is 24 percent. A broader interpretation of the disutility of on-the-job performance would imply larger wage premia.

The framework can be used to ascertain the role of various factors in affecting the path of real wages and employment in the future. Four factors have been identified that suggest real wages will decline over time, accompanied by increases in employment. First, note from equation (15) that as labor supply increases, the NSC entails a declining wage, as would be expected. Second, as the recession abates, the labor separation rate that is due to turnover can be expected to decline and with it the NSC. Third, if the labor market could be made more flexible so that a poor performer could be dismissed more easily or quickly, q would rise, lowering the NSC. Fourth, as social and political conditions change, if the motivation of the labor force increases, e would decline, lowering the NSC. There are also conditions under which real wages would rise, with differing effects on employment. Were labor productivity to improve, shifting the marginal product or labor demand curve up in Figure 2, the equilibrium wage and employment should rise. Finally, if and when the labor market began to tighten in the sense that new hires were more numerous than new entrants to the pool of unemployed, the accession rate would rise, raising the NSC and lowering employment. 2/

1/ Factors such as the legal framework for the labor market, the strength of unions, and social conditions are important determinants of the ability and willingness of employers to fire poor performers. In a recent case in Industrial Court where the National Union of Metalworkers of South Africa (NUMSA) filed suit against Schnaier Metal Industries for unfair dismissal of workers for misconduct, the court ruled that even in cases where an employee is caught in the act of misconduct, he may not be dismissed without a fair hearing. In addition, a worker must be given time to prepare for such a disciplinary hearing. (See National Manpower Commission, 1992.

2/ It should be noted that because of rapid expected labor supply growth, the most optimistic of output growth forecasts for South Africa succeeds only in keeping the pool of unemployed constant over the medium term. See, for example, the Central Economic Advisory Service (1993).

c.   Collective bargaining

Accompanying political reforms, the 1980s saw a rapid rise in the membership and strength of trade unions in South Africa. Registered union membership increased from around 0.8 million in 1980 to 2.9 million by 1992, representing approximately 34 percent of the employed labor force. Considering workers in sectors that have traditionally been covered by the Labor Relations Act 1/ (that is, excluding agriculture, domestic workers, and civil servants), approximately 56 percent of workers in the private economy are unionized. Collective bargaining thus plays an important role in the determination of wages.

At the aggregate level it is difficult to isolate the influence of unions from other forces. Union density and strike activity both increased during the 1980s. Fallon (1992) finds that an indicator of strike activity is statistically significant in explaining black wages. While union density has clearly risen to very high levels, it should be kept in mind that the growth of trade unions has occurred partly for political reasons. A judgment on whether the presence of trade unions can explain the entire wage gap in South Africa requires a characterization and parameterization of trade unions' objective functions and the form of bargaining between unions and employers. As was done for the models in the previous two subsections, a simple model of collective bargaining between a union and an employer is presented and predicted wage gaps for reasonable parameter values are computed.

Barker (1992) suggests that negotiations on employment have not--so far--been an important element of the collective bargaining process in South Africa. Therefore, we follow McDonald and Solow (1981) and posit a monopoly union that sets the wage unilaterally and allows the employer to choose the volume of employment. We continue to assume that the firm's production function is characterized by diminishing returns to labor so that the marginal product of labor curve represents the profit-maximizing level of employment for the firm.

Suppose the union has N identical members. If L of them are employed, each member has probability L/N of having a job and achieving a utility level of (Z(W) - e) and probability 1-(L/N) of not being employed by the firm. As in the last section, e is used to denote the disutility of working and Z(W) is a standard utility function. If not employed by the firm, a worker achieves a utility level, $Z(\tilde{W})$, where $\tilde{W}$ represents a summary measure of alternative compensation. Expected utility of a union member is, therefore

$$\left(\frac{L}{N}\right)[Z(W) - e] + \left[1 - \left(\frac{L}{N}\right)\right]Z(\overline{W}) \ . \tag{16}$$

1/ The Labor Relations Act legalizes collective bargaining by allowing unions and employers in a particular sector to register with the Government and, if they choose to do so, to form an Industrial Council. Industrial Councils are forums for collective bargaining on wage and nonwage matters at the industry level.

Treating membership, N, as a constant, it is possible to draw indifference curves representing the union's objective function in wage and employment space, as shown in Figure 3. The indifference curves have the usual downward-sloping convex shape and utility increases with movements away from the origin. They have the special property that they are asymptotic to the horizontal line at the wage given by $Z(W) = e + Z(\bar{W})$.

As Figure 3 shows, the union's utility is maximized at the point Y where an indifference curve is tangent to the employer's labor demand curve. The union will, therefore, pick the wage corresponding to point Y. Mathematically, this point represents the maximum of the union's utility function subject to the constraint that the firm is on its labor demand curve. The equilibrium point Y can therefore be represented by the condition

$$\frac{Z'(W) \cdot W}{[Z(W) - e - \bar{W}]} = - \epsilon_W^L , \tag{17}$$

where the elasticity of the gain from employment equals the (absolute value of the) elasticity of the demand for labor.

Figure 3. A Model of Collective Bargaining.
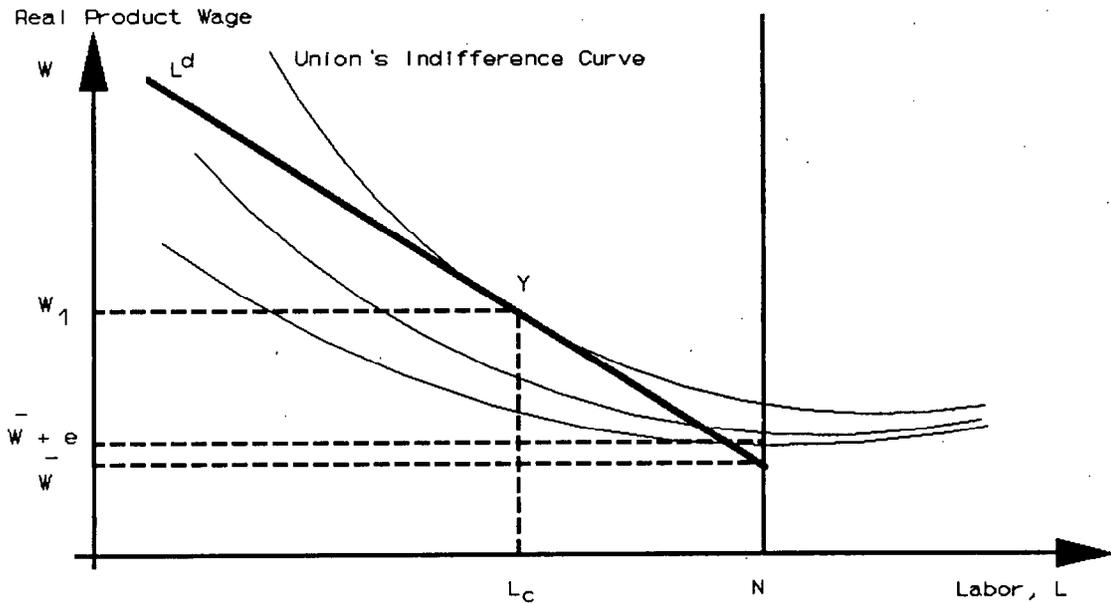
To see that this model can predict substantial wage gaps, consider the special case of risk-neutral workers and suppose that $Z(W)$ can be represented as in the last subsection by W. Then, the above condition

implies that for a disutility of effort of 5 percent of the alternative wage, and an elasticity of labor demand of 1.5, $W = 3.15 \bar{W}$. 1/

The implications of this sort of model are well known. The extent of the wage gap created by unions should be an increasing function of union density. The model suggests that, to the extent that competitive wages are paid in the non-unionized sector, the wage gap will grow with increases in union strength. To the extent that unions play a role of wage leadership, increases in union wages will also raise economy-wide wages, and unemployment will increase.

An important consideration that this model ignores, however, is the dynamic effects of union behavior on union membership. As workers in the union become unemployed, they are likely to drop out of the union over time, and membership will decline. To the extent that the union movement has a broader political agenda, the size of membership will play a role in the union's objective function, modifying the behavior represented in Figure 3. Effectively, if union membership over time is a function of the number of workers remaining employed, and the union cares about the size of membership per se, this should shift the indifference curves of the union down as greater weight is given to employment. This should lead, in equilibrium, to lower wages and higher employment.

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1/ While this may appear excessive, it should be kept in mind that the calculations assumed risk-neutral workers. With risk-averse workers, the wage gap would be lower. Also, the assumption of a constant elasticity of demand is not reasonable for such large changes. Further, it should be noted, as is well known, the form of bargaining presented is not Pareto optimal. There exists a Pareto superior region, where both employers and the union would be better off. Bargains struck in the Pareto superior region would imply lower wages and higher employment. The point remains, however, that the model can imply substantial wage gaps.

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Annex I: Sources of Data Used in Estimation

The data used in the estimation of the effective labor function were provided by Bayoumi and Corker (1991) and are those used in that study. Some salient features and sources are briefly mentioned.

Data on skill levels by racial groups for the nonprimary sector are available from manpower surveys for workers divided into 28 occupational categories. These occupations are then aggregated into three skill categories: high-level, middle-level, and semi/unskilled. High level occupations comprise professional jobs including managers, engineers, lawyers, nurses, and educators. Middle-level occupations represent clerical or skilled manual jobs, while semi-skilled and unskilled jobs are not differentiated. In the estimation, workers in the high-level skill category were denoted "skilled" while the remainder were aggregated into an "unskilled" category.

Annual data on remuneration of labor by racial group for the nonprimary sector between 1970 and 1989 were obtained from South African Statistics.

Annex II: The Wage-Incentive Model

Let V_t^X denote the expected present value of utility of a worker in state X at time t. Workers can be in one of three states: unemployed; employed and working; or employed and shirking. For an employed worker expending effort, the flow of utility at any point in time is the excess of the real wage over effort, plus the probability that the worker gets laid off times the decline in present value of utility from becoming unemployed. 1/ Thus, the change in the present value of utility of an employed worker who is not shirking can be written

$$\dot{V}_t^{NS} = \rho V_t^{NS} - \left[W_t - e + b \cdot (V_t^U - V_t^{NS})\right] , \qquad (A1)$$

where the term in square brackets represents the flow of utility at a point in time, and a dot over a variable indicates its derivative with respect to time. Similarly, for an employed shirker

$$\dot{V}_t^S = \rho V_t^S - \left[W_t + (b + q) \cdot (V_t^U - V_t^{NS})\right] . \qquad (A2)$$

The shirker has a higher utility at each point in time in that he does not expend effort. However, he faces a higher probability of becoming unemployed since he may get caught shirking and would then be fired.

In equilibrium, to obtain positive effective labor input, the firm must pay a wage such that employed labor has an incentive to expend effort and no one shirks. So, at each point in time, $V_t^{NS} \geq V_t^S$. Since firm profits are decreasing in wages, the firm will pay a wage such that this is just true, that is $V_t^{NS} = V_t^S$, which is hereafter denoted simply V_t. Then, subtracting (A2) from (A1), it follows that

$$V_t = V_t^U + \frac{e}{q} . \qquad (A3)$$

Workers, therefore, receive a constant premium--in present value terms--from being employed. The change in the present value of being unemployed can be written, in similar fashion to (A1) and (A2), as

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1/ The simplifying assumption is made that a shirker always remains a shirker, and a non-shirker always remains a non-shirker. Since the analysis is conducted for a steady state, this assumption is of no consequence.

$$\dot{V}_t^U = \rho V_t^U - \left[\overline{W} + \delta_t \cdot (V_t - V_t^U) \right] , \tag{A4}$$

where δ_t represents the probability that an unemployed worker obtains a job--the accession rate into employment. Note that (A3) must hold at each point in time (so that $\dot{V}_t - \dot{V}_t^U = 0$). Then, subtracting (A4) from (A1) (or (A2)), yields the No Shirking Condition (NSC)

$$W_t = \overline{W} + e + \frac{e}{q} (\rho + b + \delta_t) . \tag{A5}$$

III. Fiscal Choices Facing South Africa

1. Introduction

The South African Government that comes to power after the April 1994 election will face formidable fiscal challenges. It will inherit an economy where investment and growth have been chronically depressed and it will have to address the aspirations of black South Africans for appreciable economic upliftment. It will come under pressure to achieve parity in the provision of social services and economic opportunities across races. Some progress was made in this regard during the period of political transition, 1/ but substantial additional spending may be needed to eliminate the remaining "social backlog". The Government's ability to increase expenditure will be constrained by an already difficult fiscal situation: a deficit equivalent to 8½ percent of GDP in 1992/93 (April-March), dissaving equivalent to 5 percent of GDP in 1992, and tax rates that are already high by both regional and international standards. Furthermore, as will be seen below, the present structural deficit is unsustainable. Some hard choices lie ahead.

This chapter analyzes the current fiscal position (Section 2) and identifies future pressures on the budget (Section 3). In Section 4, a simple supply-side model is set up to illustrate the possible implications of various fiscal positions for investment and growth. The conclusion drawn is that the sustainability of the current fiscal position is precarious, even after cyclical adjustments have been made. It is also concluded that the scope for increasing social expenditures in the future is limited: direct tax increases are likely to impinge on efficiency, especially in light of their already high level; higher indirect taxes or base-broadening measures will be politically unpopular; and higher deficits could imply an unsustainable fiscal stance that would scare off private investors. Much will depend, therefore, on the Government's ability to reallocate expenditures to reflect social priorities.

2. The current fiscal stance in South Africa

The central government deficit (excluding extraordinary revenue) surged to 8½ percent of GDP in 1992/93, compared with 4½ percent of GDP in 1991/92, 3 percent in 1990/91, and 2 percent in 1989/90 (Appendix Table 11). 2/

1/ General government social expenditure is now 2½-3 percentage points of GDP above its 1990/91 level (Appendix Table 15).

2/ Although public sector activity occurs at various tiers of government, Chart 8 (upper panel) shows that there is little difference between the central government deficit and the consolidated general government deficit. By contrast, there have been periods when the Public Sector Borrowing Requirement (PSBR) exceeded more narrow deficit concepts by large margins; the greatest divergence coincided with the period of peak investment by the public corporations. In the mid-1980s, all three deficit concepts shown in Chart 8 converged; since then they have moved in broadly similar fashion.

This striking deterioration coincided with a severe recession after 1989 and a serious drought in 1992 (see Chapter I), but also with a sharp increase in spending on social services (Appendix Table 15).

To isolate the cyclical component of the fiscal balance and the effect of the output gap on government revenue and expenditure, the following equations were estimated by using ordinary least squares: 1/

$$\Delta t_t = \alpha_{10} + \alpha_T \Delta g_t + \eta_{1t} \qquad (1a)$$

$$\Delta e_t = \alpha_{20} + \alpha_E \Delta g_t + \eta_{2t} \qquad (1b)$$

where t is central government revenue, e is central government expenditure and g is the output gap, with all variables expressed as ratios to GDP; and Δ is the first-difference operator. 2/ The results of estimating (1a) did not allow the hypothesis $\alpha_T = 0$ to be rejected; by contrast, the estimate of the slope coefficient in (1b), $\alpha_E = -0.31$, was significant at a 5 percent level. By differentiating the revenue-GDP and expenditure-GDP ratios with respect to real GDP, the slope coefficients in (1a) and (1b) can be written as:

$$\alpha_T \approx t(\epsilon_T - 1) \qquad (2a)$$

$$\alpha_E \approx e(\epsilon_E - 1) \qquad (2b)$$

where ϵ_T is the elasticity of real government revenue with respect to real GDP and ϵ_E is the elasticity of real government expenditure with respect to real GDP. Since t > 0, it can be seen from (2a) that $\alpha_T = 0$ is consistent with $\epsilon_T = 1$. Similarly, from (2b), given that e is about 0.3, $\alpha_E = -0.31$ implies $\epsilon_E \approx 0$. The results of estimating (1) are therefore consistent with a revenue elasticity of about unity and an expenditure elasticity of about zero.

The implied estimate of a zero expenditure-GDP elasticity suggests the absence of the standard industrial-country cyclical effect on expenditures

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1/ For an explanation of the methodology, see International Monetary Fund (1993).

2/ The gap variable is defined with respect to the trend in output rather than by making any reference to full employment or potential output; the limited usefulness of potential output as a benchmark in this context is argued by Gramlich (1991). The trend in output was estimated with reference to the log of output over the period 1980/81-1992/93. Equations (1a) and (1b) were estimated over 1981/82-1992/93 using annual data on the revenue- and expenditure-to-GDP ratios of Central Government.

SOUTH AFRICA
GOVERNMENT DEFICITS, 1980/81-1992/93 1/
(In percent of GDP)
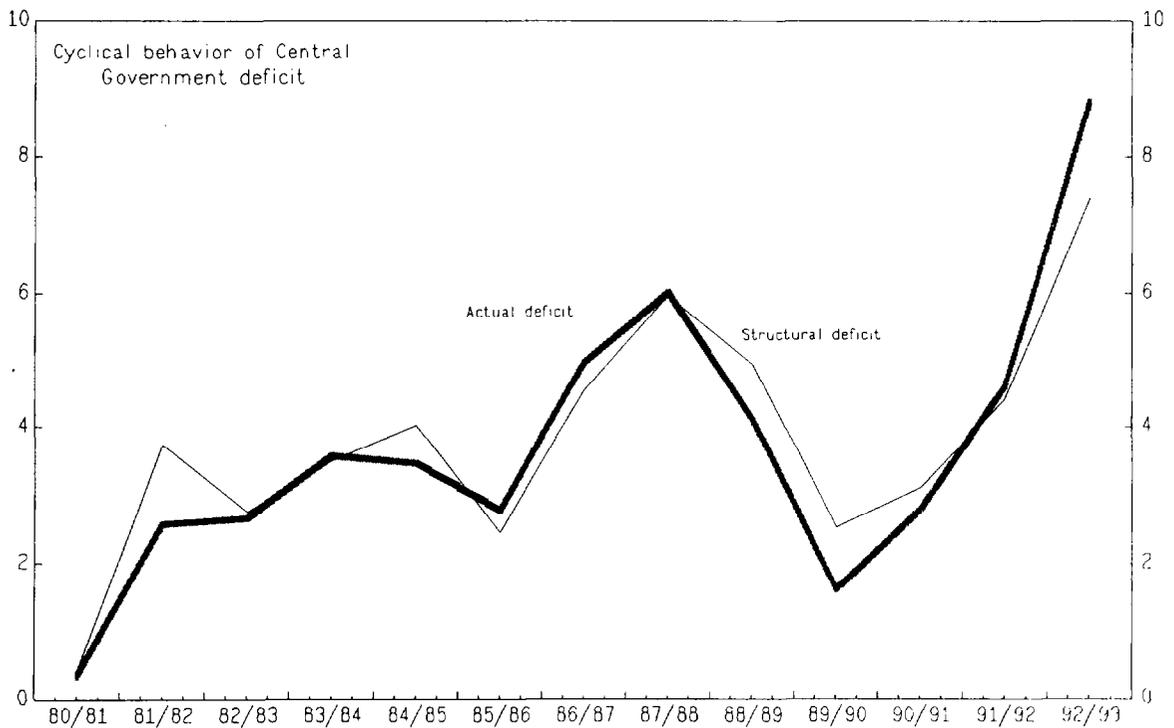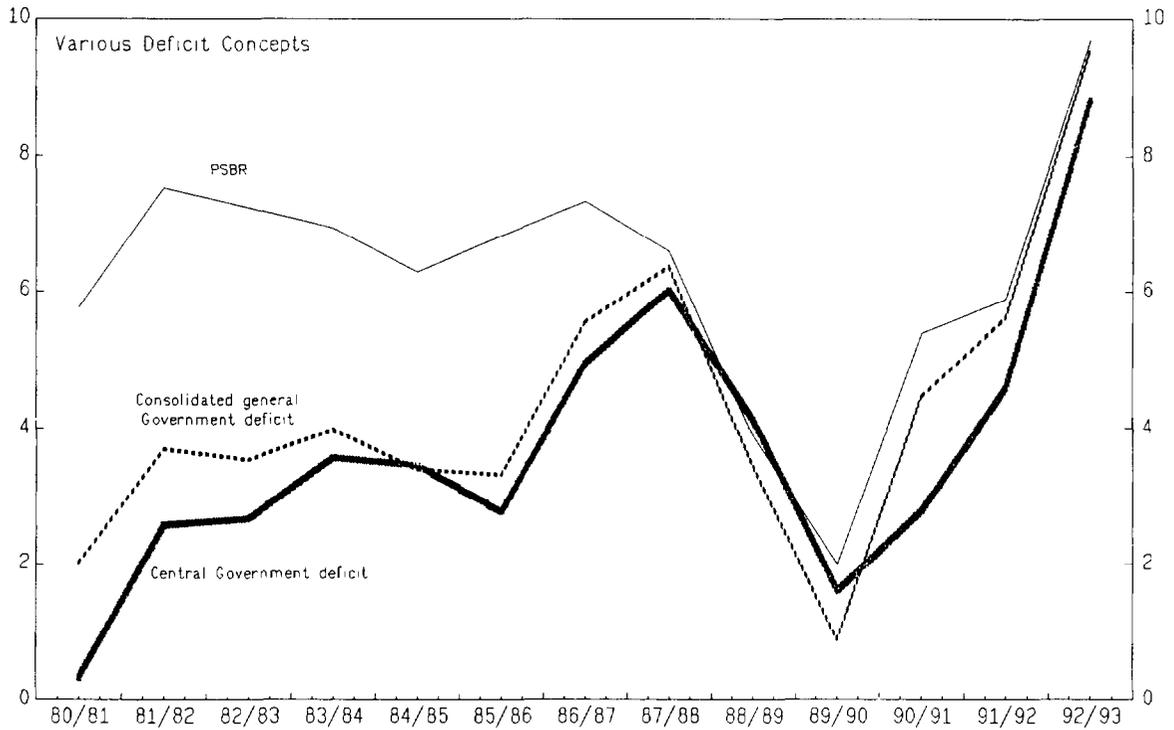
Sources: South African Reserve Bank, Quarterly Bulletin; staff estimates.

1/ Fiscal year begins April 1.

in South Africa. This is because there is little welfare spending that is sensitive to the cycle. 1/ Instead, it appears that with the onset of a recession or boom, revenues vary in direct proportion to GDP, but expenditures are kept constant in real terms so that the expenditure/GDP ratio rises or falls depending on the cyclical change. This generalization is consistent with the worsening of the fiscal position that has occurred in the current recession. 2/ It has the implication that the end of the recession will not bring a revenue boost (in the sense that the revenue ratio, t, will rise); rather, the cyclical component of the current deficit will only disappear to the extent that the Government is able to prevent real expenditure from growing in line with real GDP.

Chart 8 (lower panel) plots the actual deficit of Central Government and the structural deficit derived using the results described above. In 1992/93, the cyclical component of the deficit is about 1½ percent of GDP. 3/ This implies a structural deficit of 7 percent of GDP and a primary structural deficit of about 2½ percent. By performing the standard calculation, it is readily apparent that such a fiscal stance is unsustainable. 4/ 5/ Indeed, sustainability of the 1992/93 fiscal position, given the real interest rate, would have required that the real growth rate exceed 5 percent per annum. As discussed in Chapter I, a more restrictive stance was adopted in the 1993/94 budget; however, even if the deficit is reduced as targeted to 7 percent of GDP--implying a primary balance of about 1 percent of GDP--such a position is still not sustainable with the real interest rate and growth rate prevailing in 1993.

1/ The only major welfare transfer from Central Government is the social pension; unemployment insurance schemes are self-financing and do not have wide coverage.

2/ But the result does not depend on this episode in South Africa's economic history; the same parameter estimates were obtained when the estimation period was shortened to end in 1988/89.

3/ In 1992/93, the calculated output gap was 4½ percent of GDP.

4/ The fiscal stance is defined as sustainable if government debt does not increase as a percentage of GDP over time. The condition for sustainability is that $p \leq (r-g)b - \pi m$, where p is the government's primary balance (i.e., the balance exclusive of interest payments) as a percent of GDP, r is the real interest rate, g is the real growth rate, b is the debt-GDP ratio, π is the inflation rate, m is the ratio of currency in circulation to GDP and it is assumed that πm is not included in the primary balance as a result of the transfer of central bank profits to government. Real growth in 1993 is projected to be 0.5 percent; the real interest rate on government debt is about 4.0 percent; the debt/GDP ratio is about 45 percent and as much as 20 points higher after including government guaranteed debts; seignorage amounts to about 0.5 percent of GDP (see Kahn, et al., 1992).

5/ This finding is consistent with recent work by the South African Reserve Bank (van der Merwe, 1993).

3. Pressures on the budget

General government expenditure on social services has increased markedly over the past few years, rising from around 12½ percent of GDP at the beginning of the 1990s to the present level of 15 percent of GDP (Appendix Table 15). Nevertheless, if the objective were to equalize the provision of social services across racial groups at the level previously enjoyed by the white population group, then even this progress would be inadequate. For example, the level of social spending necessary to achieve parity in social spending at the former white level of provision has been estimated to be about one quarter of GDP; see Table 6. 1/

Comparison of the Lachman-Bercuson estimates with the 1993/94 budget provision suggests that the remaining "backlog" is in the region of 11 percentage points of GDP per annum (Table 6). User fees have been proposed as a way of closing this gap, but even if they were used to their absolute maximum--for example, so that the wealthier or higher-income population did not receive any social services for which it did not pay the full cost--the social spending backlog would still be about 7 percentage points of GDP per annum. 2/

In the light of the pressures on the budget described above, what room for maneuver would a future government have? To begin with, the scope for future tax increases appears to be quite limited. Indirect taxes are seen as regressive and attempts to raise them will encounter significant political opposition. It might be possible to further increase the rate of VAT, but any sizable rise may well have to be traded off against an expanded amount of zero-rating for necessities, thus reducing the efficiency of the tax.

In terms of direct taxes, some evidence suggests that South Africa is already a relatively highly taxed economy--both in comparison will other middle-income countries, and even in comparison with industrial countries if the tax burden is broken down by racial group. 3/ This impression is confirmed by Table 7, which shows that South African direct tax rates are among the highest in the region, so that attempts to increase them will enhance the attractiveness to South African firms of relocating to neighboring countries. 4/ The potential for broadening the tax base

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1/ See van der Berg (1991) and Lachman and Bercuson (1992).

2/ Charging user fees to those on higher incomes--say 15 percent of the population--to cover all the social services they receive would imply that the Lachman-Bercuson estimate of a spending need of 26 percent of GDP (see Table 6) could be reduced by about 4 percentage points.

3/ See Lachman and Bercuson (1992).

4/ A comparison with countries that are competing with South Africa for foreign (rather than South African) capital also suggests that South African tax rates are relatively high; for example, Malaysia recently announced that its company tax rate would fall to 30 percent by 1995.

Table 6. South Africa: Estimated Social Backlog

(In percent of GDP)

	Amount necessary to equalize at white level 1/	Actual spending 1990/91	Budget provision 1993/94	Remaining backlog
Nontertiary education	15.4	5.5	6.3	9.1
Health	4.7	3.1	3.5	1.2
Social welfare	3.1	2.1	2.8	0.3
Subtotal	23.2	10.7	12.6	10.6
Housing 2/	1.0	0.5	0.4	0.6
Other 3/	1.5	1.5	2.1	...
Total	25.7	12.6	15.0	11.2

Sources: Staff estimates.

1/ Estimate made by Lachman and Bercuson (1992).
2/ Housing need (1 percent of GDP per annum) assumes clearance of backlog at 10 percent per annum plus provision of housing to new urban arrivals (150,000 per annum).
3/ Excludes any expenditure on land redistribution.

Table 7.   South Africa: Comparison of
Income Tax Rates of Countries in the Region

(In percent)

Country	Company tax rate	Maximum rate of individual income tax
Botswana	40.0 1/	40.0
Lesotho	35.0 2/	32.0
Malawi	35.0	35.0
Namibia	38.0	38.0
Swaziland	37.5 3/	39.0
Zambia	40.0	35.0
Zimbabwe	42.5 4/	55.0
South Africa	40.0 3/ 5/	43.0

Sources: Data provided by country authorities.

1/   Reduced to 35 percent for companies listed on the Botswana Stock Exchange.
2/   Applies to nonmanufacturing companies; manufacturing companies are taxed at a rate of 15 percent.
3/   Applies to nonmining companies.
4/   Branches of foreign-owned companies are taxed at a rate of 50.9 percent.
5/   Plus 15 percent of dividends distributed.

should also not be exaggerated. A significant reduction in exemptions is a component of the currently proposed tariff reform (see Chapter VI), but so too is a reduction in the level of rates; in any case, import duties are a minor source of revenue. Moreover, while the value-added tax base has been narrowed by zero-rating of foodstuffs, this was a political price that had to be paid in order to have a VAT at all.

The alternative to increasing revenues to finance additional social spending is to make savings elsewhere on the expenditure side of the budget. One argument commonly heard is that reduced hostilities in the southern African region will unlock a "peace dividend." However, Appendix Table 15 shows that a drop in defense spending in the last few years has been almost exactly offset by an increase in expenditure on other protection services (i.e., police). Thus, for the peace dividend to be realized, there will have to be a significant diminution of violence within South Africa's borders. A second argument is that apartheid created a fiscal system replete with inefficiency and duplication, so that its demise should bring expenditure savings. This must be correct insofar as the various homelands required substantial separate bureaucracies and the previous system of racially separate ministries duplicated bureaucratic functions. However, the extraordinary opaqueness of the fiscal accounts makes it impossible to determine the potential magnitude of savings from this source. Moreover, in the very short run the political transition will require some increases in expenditure: for example, the cost of integrating the various armies and perhaps the cost of extending pension rights to those who served nongovernment parties during the previous political dispensation. Therefore, while there is undoubtedly some scope for saving through reduced protection services and greater bureaucratic efficiency, it is difficult to escape the conclusion that there will need to be substantial cuts in some government programs in order to find those with higher priority. Also, the social backlog will only be eliminated within a sustainable fiscal framework by setting levels of social spending for all South Africans that are affordable.

One method of tackling inequality in the provision of social services and in particular, of urban infrastructure, is evolving in spontaneous rather than coordinated fashion at present: the parastatals appear to be taking responsibility in their own sectors for various social investments. Thus, for example, Eskom (the electricity utility) is contemplating the electrification of almost a million extra dwellings over the next five years, while Telkom (the telecommunications company) apparently has ambitious plans to increase access to telephones. The desirability of these schemes aside, it should be recognized that if they do not generate commercial rates of return, they are likely to entail future calls on the government budget--that is, either direct subsidies or calls on debt guarantees.

The question of parastatals is important in itself. The regulatory structure to which they are subject should require that they operate on commercial criteria. To the extent that they are induced to undertake

investments which are justified on social rather than economic grounds, it is important that such operations be brought on budget, not least because this would allow public scrutiny. Moreover, it should be recognized that allowing parastatals to finance loss-making investments by increasing the fees they charge higher income customers is tantamount to a devolution of tax policy decisions to the parastatals.

4.   A model of fiscal policy and private fixed investment

     In order to trace out the macroeconomic implications of different fiscal positions, a simple supply-side model is developed and simulated in this section. The central idea is a link between private investment and the resolution of uncertainty, in particular about the sustainability of future fiscal policy. The tendency to delay irreversible investment in the face of uncertainty has been much emphasized in recent theoretical literature. 1/ Whereas earlier work emphasized the investment-reducing effect of uncertainty when investors are risk averse, the incentive to delay irreversible investment is present even under risk neutrality. With the future uncertain, delay involves trading off the returns from investing now against the gains from being able to make a more informed investment decision in the future. 2/

     Most would agree that a revival of private investment in South Africa is contingent on a resolution of the current state of uncertainty, and notably uncertainty about future economic policy. It is not clear to what extent the economy will be controlled and there is considerable apprehension about fiscal policy. Investors considering irreversible investment have to weigh the possibility of a new government following an expansionary and unsustainable fiscal path, that would end with some combination of punitive taxes, cripplingly high real interest rates and/or hyperinflation. In these circumstances, investors are likely to favor a wait-and-see attitude until the new Government establishes some fiscal credentials. To capture this idea in the simulation model, it is assumed that private investment will increase only if the fiscal stance is expected to be sustainable. The level of public investment, by contrast, is exogenous and varies according to the scenario being considered. It is assumed that public investment does not directly affect the level of private investment, or equivalently that public

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     1/ For surveys, see Pindyck (1991) and Dixit (1992).
     2/ The modified investment rule in the presence of irreversibility and uncertainty is that expected profits should be no less than the user cost of capital plus the opportunity cost of exercising the option to invest; see Pindyck (1988). This option has value because by waiting, the investor can choose not to invest in future states of the world where it has become apparent that profits will be low; the expected future return from the investment therefore tends to be higher with delay than without. The option has no value if investment decisions are reversible, since the investment can be (costlessly) scrapped in low profit states.

investment is not perceived to be complementary to private investment. 1/ The model is closed by assuming a simple accelerator relationship between growth and net investment.

Three scenarios are considered, differentiated according to the expenditure stance adopted by the Central Government. 2/ Consistent with current thinking in South Africa as to the likely fiscal stance for 1994/95, Scenario I targets a small reduction in noninterest recurrent expenditure over the level budgeted for 1993/94, but leaves government capital expenditure unchanged; the net effect is to reduce the budget deficit to about 6 percent of GDP in 1994/95, compared with the 7 percent budgeted for 1993/94 (see Table 8). 3/ The other two scenarios considered are more expansionary; both have the initial effect of widening the budget deficit to 9 percent of GDP. Scenario II attempts the same improvement in the Government's savings position as in Scenario I, but assumes additional capital expenditure amounting to 3 percentage points of GDP. In Scenario III, capital expenditure is unchanged (as in Scenario I), but noninterest recurrent expenditure increases by 3 percentage points of GDP over the 1993/94 budget level.

For the particular calibration of the model adopted, the simulation exercise shows that only Scenario I satisfies the sustainability criterion of a nonincreasing government debt-GDP ratio (see Table 8 and Chart 9, upper panel) This conclusion is confirmed by calculating the Blanchard indicators of sustainability, which remain positive in Scenarios II and III in the long run. 4/ Chart 9 also shows the implications of the proposal made in the Government's Normative Economic Model that a position of zero government dissaving be achieved; it can be seen from the chart that such a fiscal turnaround would halve the debt-GDP ratio within twenty years and is

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1/ See Khan and Kumar (1993). Noncomplementarity does not seem an unreasonable assumption in South Africa given that the existing infrastructure is already quite sophisticated. While it is possible that public investment might "crowd in" some private investment, this is likely to be small compared with the crowding-out potential of an unsustainable fiscal position, the focus here.

2/ In line with the discussion in Section 3, all three scenarios assume that future revenue/GDP ratios remain about constant at the level implied by the 1993/94 budget.

3/ Nevertheless, the Government remains a dissaver. By contrast, in comparison to 1992/93, the Normative Economic Model's (NEM) objective of achieving zero government dissavings involves a reduction in government dissavings of about 5 percentage points of GDP. In light of the discussion in Section 3, such an improvement seems extraordinarily ambitious.

4/ The Blanchard primary gap can be interpreted as the revenue increase (expenditure decrease) necessary to attain a sustainable fiscal position (see Blanchard, 1991). The Blanchard five-year gap is the average primary gap over the next five years.

Table 8. South Africa: Illustrative Fiscal Scenarios, 1993-2000

(In percent of GDP unless otherwise indicated)

Fiscal Year beginning April 30	1993	1994	1995	1996	1997	1998	1999	2000
Parameters:								
Inflation (percent)	10.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Real interest rate (percent)	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Depreciation	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Central government revenue	23.9	24.3	24.3	24.3	24.3	24.3	24.3	24.3
Scenario I								
Central Government:								
Noninterest recurrent expenditure	23.1	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Capital expenditure	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Interest expenditure	5.6	6.0	5.3	5.7	5.8	5.8	5.9	5.9
Primary balance	-1.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Indicators of Sustainability:								
Government domestic debt	48.4	50.4	51.7	52.6	53.1	53.5	54.0	54.5
Blanchard five-year gap	2.1	0.7	0.8	0.2	-0.3	-0.3	-0.3	-0.3
Notional inflation rate 1/	79.0	78.2	54.5	39.5	23.9	23.9	24.0	24.1
Notional external interest 2/	1.6	2.2	2.8	3.2	3.4	3.6	3.8	4.0
Corporate fixed investment 3/	13.0	13.0	15.0	17.0	19.0	19.0	19.0	19.0
Real growth (percent) 4/	0.5	1.5	1.5	2.5	3.5	3.5	3.5	3.5
Scenario II								
Central Government:								
Noninterest recurrent expenditure	23.1	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Capital expenditure	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Interest expenditure	5.6	6.0	5.8	6.3	6.7	7.2	7.7	8.2
Primary balance	-1.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2
Indicators of Sustainability:								
Government domestic debt	48.4	52.7	56.9	61.1	65.4	69.7	74.2	78.7
Blanchard five-year gap	4.5	3.0	3.5	3.6	3.6	3.7	3.7	3.8
Notional inflation rate 1/	79.0	160.0	152.2	154.8	157.4	160.1	162.8	165.5
Notional external interest 2/	1.6	3.3	5.2	7.2	9.2	11.2	13.3	15.4
Corporate fixed investment 3/	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Real growth (percent) 4/	0.5	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Scenario III								
Central Government:								
Noninterest recurrent expenditure	23.1	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Capital expenditure	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Interest expenditure	5.6	6.0	5.9	6.4	7.0	7.5	8.1	8.7
Primary balance	-1.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2	-3.2
Indicators of sustainability:								
Government domestic debt	48.4	53.4	58.3	63.3	68.5	73.9	79.4	85.1
Blanchard five-year gap	4.5	3.8	4.4	4.6	4.7	4.8	5.0	5.1
Notional inflation rate 1/	79.0	182.8	178.3	183.6	189.1	194.8	200.6	206.6
Notional external interest 2/	1.6	3.6	5.9	8.2	10.7	13.2	15.8	18.5
Corporate fixed investment 3/	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Real growth (percent) 4/	0.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5

Source: Staff estimates.

1/ Inflation rate that would result if government kept the domestic debt/GDP ratio constant by increased resort to the inflation tax.

2/ External interest payments if government kept the domestic debt/GDP ratio constant by borrowing abroad. In percent of exports of goods and nonfactor services.

3/ Future increase include parastatal investment if it does not increase the PSBR; otherwise included in government.

4/ The growth rate, g, is determined as follows: g = 0.5 + 0.4i, where i is net investment (in percentage points of GDP) and 0.4 is the incremental capital output ratio.

CHART 9
SOUTH AFRICA
SIMULATION RESULTS, 1993/94-2002/03 1/
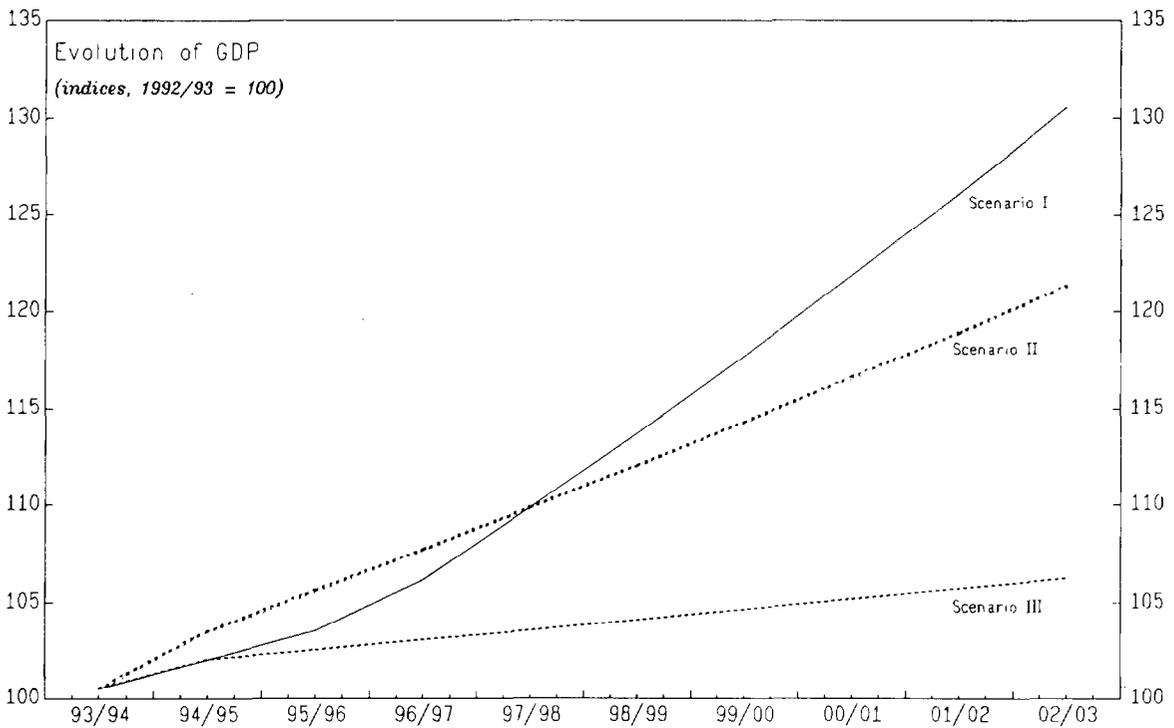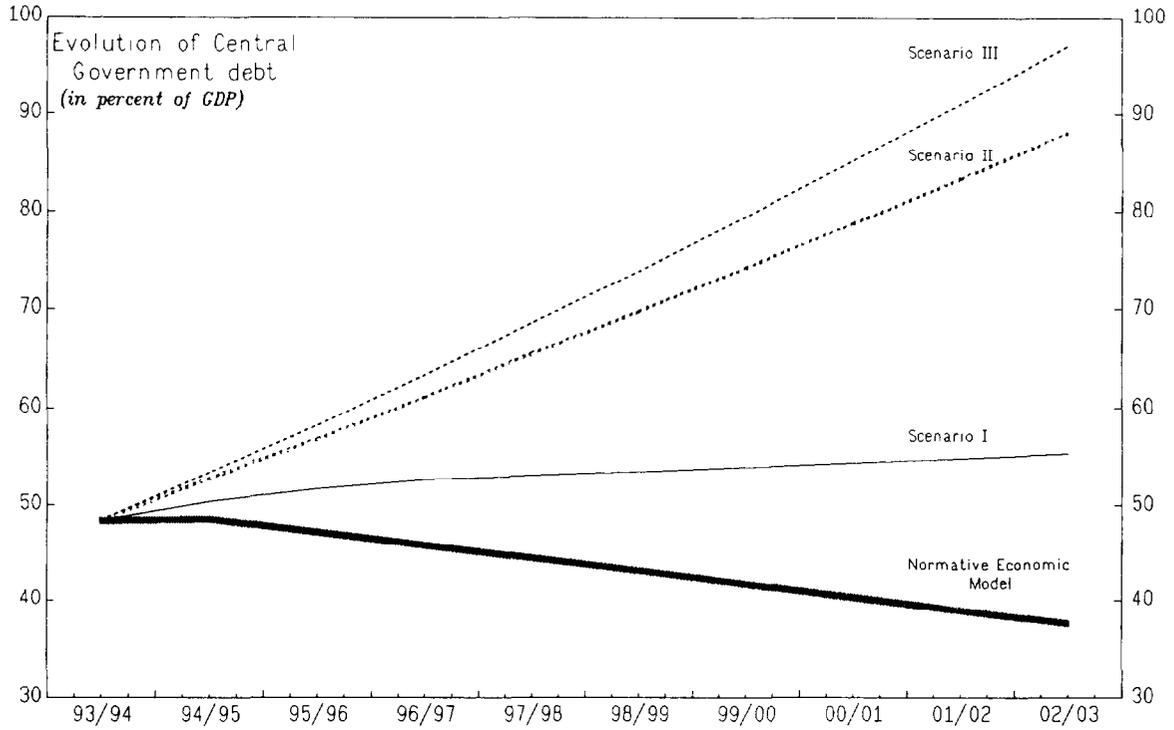
Source: Staff estimates.

1/ Fiscal year begins April 1.

therefore more than is necessary from the point of view of sustainability alone.

In terms of growth, the comparison between Scenarios I and II is of the most interest. Scenario II, with its large investment push by government, achieves annual real growth (via the accelerator) of 2 percent by 1995/96. However, thereafter, the private sector judges the fiscal stance to be unsustainable, there is no further increase in investment, and the growth rate never rises above 2 percent per annum. In Scenario I, by contrast, after a delay during which the fiscal credentials of the new Government are established, private investment and growth take off. The real growth rate, which is initially below that in Scenario II, rises to 3½ percent per annum thereafter and real GDP in Scenario I overtakes real GDP in Scenario II (Chart 9, lower panel). 1/

Even if the domestic debt dynamics shown in Chart 9 for Scenarios II and III were considered to be acceptable, it would be unrealistic to expect that the real stock of domestic debt could continue to grow forever. 2/ At some point, the public would cease to be willing to hold government debt and the Government would have to look either to foreign lenders or to monetization as a source of financing. With regard to external financing, the Central Government has relatively little foreign debt at present; its external debt has been less than 1 percent of GDP since 1989, implying foreign interest payments of only about 1½ percent of export earnings. However, this situation of low external indebtedness could change quickly. Under the assumption that the Government borrows no more domestically than is consistent with maintaining a constant domestic debt-GDP ratio and sources its residual finance need abroad; foreign debt in Scenarios II and III would mount swiftly and interest obligations would begin to consume an ever-increasing portion of export earnings (Table 8).

Alternatively, the Government could switch to the inflation tax as the residual source of finance: Table 8 shows the inflation rates that would be necessary to keep the debt-GDP ratio constant at its initial level. 3/ If anything, the inflation rates shown--of around 150 percent per annum in Scenario II and 200 percent per annum in Scenario III--underestimate the rates that would be required to generate the necessary inflation tax revenue, since they assume unchanged real money balances. Indeed, because of the probable response of money demand to inflation, it may not be possible to monetize deficits of the size being considered.

1/ Growth performance is worst in Scenario III; since only the supply-side of the economy is being modelled, the boost to consumption engineered through the budget in this scenario has no effect on growth and serves only to scare off private investors.
2/ See Fischer and Easterly (1992).
3/ See Anand and van Wijnbergen (1989).

Finally, it should be noted that a number of assumptions made in the simulation model are open to question. To begin with, the same constant real interest rate was assumed across scenarios, whereas in reality the real interest rate might be expected to increase with the amount of recourse the Government makes to domestic borrowing. 1/ Incorporating this relationship in the simulation model would further tip the balance against the expansionary fiscal scenarios. Moreover, the growth rates which emerge even in the most favorable scenario only just exceed the rate of growth of the labor force; in the absence of significant factor price changes, such growth rates will not result in any appreciable reduction in unemployment, particularly if there is labor-augmenting technical progress. It will almost certainly be the case that higher growth and hence higher investment is needed, in which case the pool of savings will have to be depleted rather less by government than is the case even in Scenario I. In other words, the sustainability of the deficit--the focus in this chapter--is not the exclusive concern: the importance of the Government not crowding private investment out of the pool of available savings may even be the dominant concern. 2/

5. **Conclusion**

This chapter has attempted to illustrate the fiscal dilemma that the Government in South Africa will face. On the one hand, it will come under considerable pressure to increase spending. On the other hand, the capacity for new spending out of the existing tax base is severely circumscribed; taxation cannot easily be raised, and government borrowing cannot be further increased without sounding alarm bells about future sustainability.

The simulation results suggest that the influence of a deficit-increasing rise in government spending may well be detrimental even in the short run. This is important, because there will be those who advocate fiscal stimulus as a path to higher growth and because higher government debt may well be feasible in the short run. But these arguments do not acknowledge the possibility that unsustainable fiscal deficits will frighten off private investors and condemn the economy to a suboptimal growth path. The simulation results also suggest that if government expenditure is to increase, then investment is preferable to consumption because it permits higher growth; however, in terms of maximizing growth, a better course of action would be for the Government to run sustainable deficits and to allow private investment to stimulate growth.

1/ See Easterly and Schmidt-Hebbel (1993).
2/ The emphasis on reducing government dissaving in the authorities' Normative Economic Model may be better appreciated in this light.

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IV. Medium-Term Scenarios

1. Introduction

The two imperatives facing the South African economy today are to reduce unemployment and generate real growth sufficient to raise per capita income in a sustained fashion. The urgency of the need is evident from the severity of the present recession. Real per capita GDP fell by 10 percent during 1989-92 and unemployment reached 25-45 percent of the labor force, depending on how much informal sector "employment" is viewed as unemployment. 1/ The magnitude of the task can be appreciated by recalling that the recent recession did not occur in isolation but was the culmination of a secular decline in GDP growth that lasted two decades, as shown in the figures tabulated below. The decline in growth rates during the past two decades was accompanied by--and caused by--growing structural problems, in particular a persistent decline in gross fixed investment, which barely exceeded depreciation in 1992, and an equally persistent rise in structural unemployment, which may be 45 percent of the labor force. 2/

South Africa: Main Features of Growth, 1970-92

	1970-74	1975-79	1980-84	1985-89	1990-92
GDP growth 1/ (in percent)	3.6	3.1	1.4	1.6	-0.5
Gross fixed investment 2/ (percent of GDP)	25	26	26	20	18
Unemployment 3/ (percent of economically active population)	7	7	11	23	29

Sources: South African Reserve Bank Quarterly Bulletin; and Central Statistical Service.

1/ Annual rate during interval.
2/ Period average.
3/ First year of period.

It follows that in order to make significant inroads into unemployment, it will be necessary not only to restore aggregate demand to levels that eliminate cyclical unemployment but, more importantly, to raise the rate of investment and to ensure that wages and productivity can evolve so as to make it profitable for firms to hire more labor. The medium-term scenarios developed in this chapter illustrate in quantitative terms just how

1/ See Chapter II.
2/ Calculations presented in Chapter II give a range for the "classical" employment gap of 28-46 percent of the labor force.

adjustments in the investment ratio and unit labor costs could raise growth and employment. In addition, by highlighting the resource constraints under which the Government and the economy as a whole are compelled to operate and by showing the implications of alternative policies for the government deficit and the balance of payments, they address the question whether the growth paths achieved involve unsustainable levels of domestic or international borrowing.

The scenarios suggest, first, that even under favorable assumptions about labor market conditions, an increase in investment in the order of 8 to 10 percentage points of GDP would be needed to lower unemployment significantly; second, that since the Government's fiscal stance is already of questionable sustainability (as is also suggested in Chapter III), growth strategies involving a large increase in government spending are risky.

2. The model

The medium-term scenarios have been developed in a framework that combines a Keynesian treatment of aggregate demand (Y^{ad}) with a classical model of aggregate supply (Y^{as}) and growth. The equations of the model and the values of key parameters are set out in the Annex. In the short run, output (Y) and employment (N) are determined by aggregate demand via a multiplier mechanism, while aggregate supply (Y^{as}) is the outcome of firms' attempts to maximize profits at a given real wage. In general the two are not identical: there is an "output gap" measured as the percentage deviation of aggregate demand from aggregate supply. The model does not contain a mechanism to eliminate the output gap instantaneously; it therefore allows for some "cyclical" unemployment. However, there is a feedback from the output gap to aggregate demand via the real effective exchange rate, which appreciates when there is excess demand and thereby removes part of the excess demand. This equilibrating mechanism ensures that in the medium term the behavior of the model is governed by the supply side. The output gap also affects inflation, via an expectations-augmented Phillips curve. 1/

The treatment of aggregate demand is straightforward. Real consumption depends on real disposable income. The volume of exports is a function of world market growth and relative prices. The demands for imported consumer and capital goods are proportional to the total demands for consumption and investment goods, with investment assumed to have a higher import content than consumption. Import demand is also price sensitive; imports rise when their price falls relative to domestically produced goods. Investment is exogenous: a formal, quantified, model of investment would not be appropriate in circumstances where the decision to invest is so dominated by uncertainty regarding the future political and economic environment.

1/ Expected inflation is set equal to actual inflation during the previous year.

Instead, the approach has been to specify alternative plausible investment paths, taking into account the likely influence on investment of, for example, unit labor costs and fiscal imbalances. This approach also permits one to work backwards and see what rates of investment would be needed in order to bring about sustained growth in per capita income.

Aside from the specification of import and export functions the key assumption about external conditions is that there is no constraint on external financing. In other words, it is assumed that if the investment path requires more saving than is generated domestically, investors will be able to raise the balance on international capital markets without paying excessive premia. In practice, the external debt ratios that emerge in the simulations are low both by international standards and in comparison with levels serviced by South Africa before 1985. Therefore, to the extent that the investment in question is private and driven by commercial considerations this assumption is innocuous. If the international borrowing is undertaken by Government or by public enterprises with government guarantees, however, the external financing constraint may begin to influence investor judgements about sustainability.

On the supply side of the model, the key assumption is that the real product wage is set exogenously above the market-clearing level. In practice, as has been argued above, the labor market is much more complex than this: in some sectors the wage is set competitively; in others it is agreed by collective bargaining; in yet others it may be fixed by an unlimited supply of labor at subsistence wage. The assumption that the real wage is exogenous does, however, provide the simplest characterization that is consistent with two striking features of the South African labor market during the last decade: the persistence of very high and rising unemployment and the absence of any resulting decline in the real wage. It also has the merit of analytical convenience in that it allows one to trace the effects of alternative paths of the real wage on growth and employment.

A constant elasticity of substitution (CES) production function is used to represent the production technology. The elasticity of substitution has been set equal to 0.5, a value within the range of estimates for South Africa and other countries, and the remaining parameters of the production function have been calculated based on factor shares in 1989. 1/ This parameterization implies that the elasticity of demand for labor is approximately -1.5; a cut in the real wage results in a more than proportionate increase in employment and, therefore, an increase in the total amount of wages earned by workers. As is usual in growth models, all technical progress has been assumed to be labor-augmenting. Here the rate of technical progress has been set at 1 percent a year, somewhat higher than has been estimated for South Africa in the past: this might be interpreted

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1/ As discussed in Chapter II, the assumed elasticity of substitution is at the low end of the range of estimates for major industrial countries but higher than estimates for unskilled and semi-skilled South African labor.

as reflecting an assumed gradual improvement in morale and in labor-employer relations in the post-apartheid era.

Given the real wage, and the parameters of the aggregate production function, it is straightforward to solve for firms' desired levels of output and employment (respectively, Y^{as} and L^{as}) as function of the real wage ($\bar{w}$) and the stock of capital inherited from the previous period (K):

$$Y^{as} = Y(K, \bar{w}), \quad Y_K > 0, \quad Y_w < 0$$

$$L^{as} = L(K, \bar{w}), \quad L_K > 0, \quad L_w < 0$$

These equations--which are written out explicitly in the Annex--underline the pivotal role that is played by the wage rate and the capital stock, and hence investment, in determining the growth of real GDP and employment: both output and employment rise with an increase in the capital stock and fall with an increase in the real wage.

The character of labor market disequilibrium in 1992, the year on which the model is calibrated, is illustrated in Figure 4. At the current real wage, $\bar{w}$, firms would hire L^{as} workers if they could sell the corresponding output. However, inadequate aggregate demand constrains employment to L^{ad}, with the difference being equal to cyclical unemployment. 1/ At the same time, since the real wage is higher than the market-clearing wage, w^{fe}, there is structural unemployment equal to the difference between the labor force L^{fe} and the firms' optimal employment level L^{as}. The calculations discussed in Chapter II suggest that the bulk of unemployment is currently structural. Thus even after cyclical unemployment has been eliminated (say, through a revival of investment demand or via a depreciation of the real effective exchange rate) and the economy has moved to point A on the figure, South Africa will continue to experience high unemployment.

This structural unemployment is the consequence of a real wage that is higher than the marginal product of labor at full employment. It follows that the remedy for structural employment is to increase the marginal productivity of labor (raising the demand for labor), to lower the real wage, or some combination of the two. In Figure 4, a wholly investment-based growth strategy, with no change in the real wage (and an unchanged labor force) is represented as a gradual move from point A to point B. Once full employment is reached, of course, the real wage would be driven up to reflect the scarcity of labor. The other extreme case, where the real wage adjusts to clear the market, is represented as a move from point A to point C.

Neither of these extremes represents a likely or desirable outcome. The calculations discussed in Chapter II indicate that the wage cut required

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1/ These conditions of excess supply would cause the real effective exchange rate to appreciate.

Figure 4
Labor Market Conditions
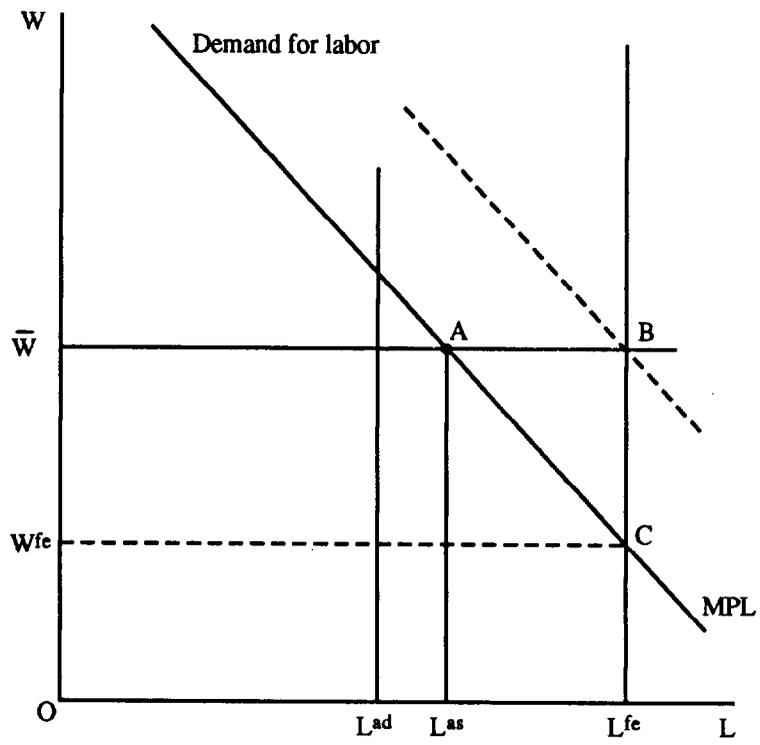
to achieve full employment with the current stock of capital would be unacceptably large and disruptive. 1/ At the same time, the quantitative scenarios that follow suggest that a pure investment strategy will not bring sufficient growth, even given the fairly optimistic rate of labor-augmenting technical progress in the model and the assumption that the real wage does not increase.

2. The scenarios

a. Baseline scenario

Three main assumptions characterize the baseline scenario (Table 9). First, the lifting of sanctions and the reduction of politically-generated uncertainty cause fixed investment to rise steadily, from about 16 percent of GDP initially to 20 percent in 1997, and to remain at the higher level. Second, government dissaving is reduced over time as a percentage of GDP by scaling back current expenditures (as a percentage of GDP), and there is a slight increase in government investment. The average tax rate is unchanged. The net effect is a gradual reduction in the government deficit as a percentage of GDP. 2/ Third, the real wage remains constant in spite of labor-augmenting technical progress of 1 percent a year. This implies that real unit labor costs are declining gradually, increasing the demand for labor and reinforcing the incentives for investment. 3/

In the short term, the demand-side effect of the increase in investment propels the economy out of the 1989-93 recession and raises employment by 4 percentage points in 1995. This is a significant increase in absolute terms but small relative to the initial unemployment rate. In the medium term, the more rapid capital accumulation raises the equilibrium growth rate of GDP to 3 percent per annum. This growth brings a 2½ percent annual increase in employment, somewhat less than the 2.7 percent rate of growth of the labor force: thus the medium-term growth of supply does not bring any further reduction in the unemployment rate.

In spite of this relatively slow growth, the policies in the baseline scenario are viable in the narrow sense that they do not entail unsustainable domestic or external borrowing. As a result of the scaling

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1/ Even though--given the greater than unit-elastic demand for labor-- they would result in an increase in overall labor income.

2/ Real interest rates are assumed to be unchanged at end-1993 levels.

3/ Real unit labor costs decline by less than labor's efficiency rises because the increased efficiency induces a substitution of labor for capital, which increases unit labor costs. Naturally, unit labor costs cannot decline forever; a continuing decline would eventually bring full employment. Thereafter, in a steady state, the real wage would rise at the same rate as the labor-augmenting factor productivity and the unit labor costs would be constant.

Table 9. South Africa: Medium-Term Scenarios, 1993-2002

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Baseline										
(Percent changes)										
Real GDP	1.0	2.0	3.2	2.0	2.1	2.3	2.6	2.8	2.9	2.9
GDP deflator	9.7	8.1	8.3	8.5	8.8	8.8	8.7	8.6	8.4	8.3
Employment	0.4	1.2	3.9	1.6	1.6	1.6	2.0	2.2	2.3	2.4
Unit labor cost	0.3	0.7	0.7	-0.4	-0.5	-0.7	-0.6	-0.5	-0.5	-0.5
Export volume	2.2	2.0	2.4	1.7	1.9	3.0	3.5	3.7	3.8	3.8
Import volume	1.1	2.4	7.1	6.4	6.1	2.9	1.9	1.8	1.8	1.8
Real exchange rate	-4.1	--	1.1	2.2	1.8	0.1	-0.8	-1.1	-1.1	-1.2
(In percent of GDP)										
Fixed investment	15.3	15.6	16.9	18.1	19.3	19.6	19.6	19.6	19.5	19.4
Private saving	20.0	21.6	22.1	22.4	22.7	22.9	22.9	22.9	22.9	22.8
Current account	1.5	1.6	0.9	-0.1	-1.1	-1.2	-0.9	-0.5	--	0.5
Government deficit	6.5	6.5	5.5	5.7	5.8	5.7	5.5	5.0	4.5	4.0
External debt	15.1	14.0	13.3	13.6	13.9	14.4	14.6	14.3	13.5	12.2
Government debt	47.2	49.5	49.8	50.7	51.4	51.9	52.0	51.6	50.8	49.6
Debt service ratio 1/	10.6	11.2	11.8	11.7	13.3	11.7	13.1	13.6	12.9	10.3
SCENARIO 1: High Government Investment										
(Percent changes)										
Real GDP			3.4	2.0	2.3	2.6	2.9	3.1	3.1	3.2
GDP deflator			8.4	8.6	8.8	8.8	8.7	8.5	8.3	8.1
Employment			4.2	1.6	1.8	1.8	2.3	2.5	2.6	2.7
Unit labor cost			0.8	-0.5	-0.6	-0.7	-0.6	-0.5	-0.5	-0.5
Export volume			1.9	1.7	2.1	3.2	3.8	4.0	4.0	4.0
Import volume			9.6	6.4	6.1	3.0	2.0	1.7	1.7	1.7
Real exchange rate			1.9	2.2	1.5	-0.2	-1.1	-1.5	-1.5	-1.5
(In percent of GDP)										
Fixed investment			17.5	18.8	20.0	20.4	20.4	20.3	20.2	20.2
Private saving			22.2	22.7	23.1	23.4	23.6	23.7	23.7	23.7
Current account			-0.1	-1.1	-2.0	-2.0	-1.6	-1.0	-0.4	0.1
Government deficit			6.9	7.3	7.6	7.6	7.6	7.2	6.7	6.2
External debt			13.8	14.7	15.6	16.6	17.3	17.4	16.9	15.9
Government debt			51.1	53.4	55.5	57.4	58.9	59.8	60.3	60.2
Debt service ratio 1/			11.9	12.3	14.4	13.2	15.0	15.8	15.4	11.6
SCENARIO 2: Low Unit Labor Costs and High Investment										
(Percent changes)										
Real GDP			6.8	3.2	3.1	3.6	3.9	4.5	4.7	4.7
GDP deflator			7.8	8.0	8.3	8.5	8.2	7.7	7.3	6.8
Employment			9.8	3.3	2.7	3.0	2.8	3.8	4.2	4.1
Unit labor cost			-2.4	0.1	-0.4	-0.7	-1.0	-0.6	-0.5	-0.6
Export volume			4.9	1.9	1.5	2.2	4.6	5.2	5.2	5.4
Import volume			9.6	8.9	10.1	9.1	1.9	1.6	2.3	1.6
Real exchange rate			-2.8	1.8	2.5	1.4	-2.5	-3.4	-3.3	-3.7
(In percent of GDP)										
Fixed investment			17.6	19.5	21.9	24.0	24.0	23.9	24.0	23.8
Private saving			21.5	21.6	21.7	21.6	21.2	20.7	20.2	19.6
Current account			0.6	-0.9	-2.7	-4.3	-3.7	-2.9	-2.3	-1.4
Government deficit			4.1	3.8	3.4	2.8	1.9	0.7	-0.6	-2.0
External debt			13.3	13.8	15.3	18.3	21.1	23.0	24.1	24.3
Government debt			47.1	46.1	44.7	42.6	39.8	36.1	31.5	26.2
Debt service ratio 1/			11.9	11.9	14.0	13.8	17.4	19.7	20.6	16.8

Source: Staff projections.

1/ External debt service payments as a percentage of exports of goods and nonfactor services.

back of government consumption (as a percentage of GDP), the ratio of government debt to GDP eventually returns to the 1994 level, slightly under 50 percent of GDP. The external current account turns around from a surplus of 1½ percent of GDP to a deficit of about 1 percent of GDP by 1997-98; this represents the need to draw on foreign resources to finance the rise in investment. In terms of the trade equations of the model, the turnaround in the current account reflects the strength of aggregate demand and, in particular, the high import content of investment. However, by the end of the period, the current account returns to approximate balance and the debt ratio begins to decline as increases in aggregate supply cause the real effective exchange rate to depreciate, increasing exports and causing a substitution of domestic for imported goods.

In a broader sense, however, this scenario is not sustainable, since it leaves a wide--and widening--imbalance in the labor market. Indeed, an important implication of this scenario is that a modest increase in the investment ratio--by 4 percentage points of GDP--is not sufficient to lower unemployment. This is the case even under labor market conditions (a constant real wage in spite of increasing labor productivity) that are relatively supportive of increased employment.

b. Scenario 1: Doubling government capital expenditure

Could the growth of output and employment be raised in a sustainable fashion by an aggressive public investment program? To address this question, Scenario 1 examines the consequences of increasing government capital expenditures to 3 percent of GDP--double the level in the baseline scenario--starting in 1995. It is assumed that the political pressures to maintain the level of government services will be such as to preclude an offsetting decrease in the real level of government consumption; consequently, the increased government investment will give rise to larger primary government deficits. Other features of the scenario are relatively favorable to the growth impact of government investment: it is assumed that government investment is as productive as private investment and that there is only a modest crowding out of private investment.

While the growth of output and employment is slightly higher in Scenario 1 than in the baseline (output growth reaches 3.2 percent per annum compared with 2.9 percent), the question posed by this exercise is whether the larger government deficits are sustainable. This depends on whether the increase in the growth of output--and thus of the tax base--is sufficient to offset the increase in the growth of debt. The answer suggested by the scenario is not encouraging: the ratio of government debt to GDP rises by 20 percent during the eight-year period from 1994 to 2002. The strong implication of this result is that the deficits entailed by even a fairly modest government investment drive would be unsustainable.

From the point of view of potential investors, the presence of unsustainable government deficits increases the degree of economic

uncertainty by making it more likely that there will be accelerating inflation, higher taxes, or severe financial imbalances during the lifetime of investment projects under consideration. As discussed in Chapter III, recent models which emphasise the irreversibility of investment suggest that uncertainty leads entrepreneurs to postpone investment and adopt a wait-and-see attitude. It is difficult to quantify the effect this would have on investment; however, this effect is likely to be significant in South Africa where the initial policy stance will constitute the new Government's entire track record.

In the medium term, Scenario 1 is characterized by a lower inflation rate than the baseline scenario, but the current account deficits and the external debt ratios are higher. The low inflation rate is a consequence of the growth in supply and the fact that the model assumes there is no constraint on external financing. In practice, however, the availability of external finance might constitute the binding constraint on a scenario of this sort, in which case a much more rapid rate of depreciation might elicit higher inflation. Of course, in the long run, as in the baseline scenario, the capital accumulation resulting from higher investment ratios brings a strong supply response, which restores the current account to balance: the external debt ratio peaks in the year 2000 and declines thereafter. It would not be wise, however, to be sanguine about external viability, in spite of South Africa's small initial foreign debt ratio. There are plausible scenarios where higher crowding out and a relatively low productivity of government investment combine to reduce the long-run growth of supply, leading to unsustainable current account deficits.

The lessons of this scenario would naturally apply all the more if the increase in government expenditure was on current rather than capital goods. In that case, investment and growth would actually be lower than in the baseline scenario; consequently the tax base would increase more slowly and the problem of fiscal sustainability would be more urgent.

c. Scenario 2: Lower unit labor costs and higher private investment

Under what conditions can output and employment grow enough to generate a significant reduction in unemployment? It follows from first principles that a reduction of structural unemployment requires an increase in the productivity of labor relative to the real wage. This suggests three potential sources of a reduction in unemployment. First, private investment can raise labor productivity by equipping each worker with more capital. Second, the real product wage may be reduced. Third, there may be an "exogenous" increase in labor productivity or a reduction in the "indirect costs of labor" related, for example, to the political normalization. In principle there may be a trade-off between the three sources in that a given rate of employment growth could be attained with, say, a higher real wage, if there were an offsetting higher investment ratio. At the same time, the three sources are interrelated since a drop in unit labor costs, whether due to an exogenous increase in productivity or to a reduction in the real wage,

is likely to raise investment. Accordingly, Scenario 2 is based on the assumption that in 1995 there is a 3 percent drop in unit labor costs relative to the baseline scenario and that, partly in consequence, the investment ratio rises gradually by 4 percentage points relative to the baseline, that is, to 24 percent of GDP.

The reduction in unit labor costs, combined with the demand-related effects of increased investment, gives rise to a sharp rise in employment during 1995-97. More significant for the longer term, the equilibrium GDP growth rate rises to 4½ percent a year, consistent with employment growth of 4 percent a year over the medium term, or considerably higher than the growth rate of the labor force. Thus the combination of reduced unit labor costs and high investment holds out the prospect of reducing unemployment considerably over the medium term.

Under the assumptions of Scenario 2 the government debt ratio drops sharply but the external debt ratio rises. The government debt ratio falls because of the rapid increase in output, which raises the tax base, while spending is maintained at the same real levels as in the baseline scenario. The implication is clear: the rapid growth generated in Scenario 2 would permit a more rapid increase in government spending, including that on social services. The widening current account deficits during the first four years of this projection are the consequence of the high import content of investment; nevertheless, the question whether finance would be available is as relevant here as in Scenario 1. However, when the investment rate stops rising and cost reductions stemming from lower unit labor costs are reflected in improved competitiveness, the growth rate of imports falls significantly and export growth rises. Thus the external debt ratio levels off, implying that the balance of payments is viable. 1/

The present exercise makes it clear that a strong increase in the investment ratio (8 percentage points compared with the current level) combined with a significant reduction in unit labor costs would be necessary to bring a substantial and sustained increase in employment. As suggested above, the model implies that there is a trade-off between the investment ratio and the real wage in the sense that the same trajectory of employment could be reached with a higher wage rate if the investment ratio were also higher. The way in which the trade-off is resolved in practice will depend in part on the flexibility of the labor market, in part on labor productivity, and in part on the responsiveness of investment to profit opportunities.

1/ Two further remarks are warranted. First, insofar as the current account deficits are financed by direct investment, the accumulation of external debt will be lower than that recorded in Table 9. Second, the external debt ratio attained in this scenario remains low by international standards and lower than was normal in South Africa before the 1985 debt moratorium.

Model for Medium-Term Scenarios

This Annex presents the identities and structural equations of the model. The notation is defined below.

National income identities:

$$Y \quad = \quad Y^{ad} \quad = \quad C_p + C_g + I_p + I_g + I_{inv} + X - M$$

$$NI \quad = \quad Y + NFI$$

Balance of payments identities:

$$CA + KA \quad = \quad X - M + NFI + KA \quad = \quad BOP$$

$$DEF \quad = \quad C_g + I_g + TR - T \quad = \quad I_g - S_g$$

Saving and investment identities:

$$S_f \quad = \quad - CA$$

$$S_p \quad = \quad NI + TR - T - C_p$$

$$S_p + S_g + S_f \quad = \quad I_p + I_g + I_{inv}$$

Determinants of aggregate demand:

$$T \quad = \quad bNI, \qquad\qquad b = 0.27$$

$$C_p \quad = \quad c(1-b)NI \qquad\qquad c = 0.79$$

$$X \quad = \quad Y^* p^{\epsilon} \qquad\qquad \epsilon = 0.6$$

$$M \quad = \quad [m_c(C_p + C_g + I_{inv}) + m_i(I_p + I_g)]p^{\mu}$$

$$m_c = 0.16$$
$$m_i = 0.50$$
$$\mu = -0.6$$

$$I_{inv} \quad = \quad ngY \qquad\qquad n = 0.25$$
$$g = 0.03 \ \underline{1/}$$

1/ The parameter g is set equal to the average GDP growth rate during the 10 year forecast period.

Exogenous components of aggregate demand:

I_p, I_g

CES production (elasticity of substitution set equal to ½):

$$Y \quad = \quad F(K, L, t) \quad = \quad A(t)/(\alpha/L + (1-\alpha)/K)$$

$$A(0) = 0.932$$
$$A(t) = A(0)e^{\tau t}$$
$$\tau = 0.01$$
$$\alpha = 0.015$$

Supply and employment functions for given product wage:

$$w \quad = \quad \delta F/\delta L \quad = \quad \alpha A(t)/(\alpha + (1-\alpha)L/K)^2$$

$$L^{as} \quad = \quad L(K, w) \quad = \quad K[(\alpha A(t)/w)^{\frac{1}{2}} - \alpha]/(1-\alpha)$$

$$Y^{as} \quad = \quad Y(K, w) \quad = \quad A(t)/(\alpha/L(K, w) + (1-\alpha)/K)$$

Full employment output and employment:

$$Y^{fe} \quad = \quad A(t)/(\alpha/L^{fe} + (1-\alpha)/K)$$

Dynamics of price level and real exchange rate:

$$p \quad = \quad EP/P*$$

$$DP \quad = \quad DP^e + \pi(Y^{ad}/Y^{as} - 1) \qquad \pi = 0.6$$

$$Dp \quad = \quad \sigma(Y^{ad}/Y^{as} - 1) \qquad \sigma = 4.8$$

Money market equilibrium:

$$M/PY \quad = \quad k$$

Accumulation equations:

$$K_t \quad = \quad K_{t-1}(1-dep) + (I_p + I_g), \qquad dep = 0.05$$

$$RES_t \quad = \quad RES_{t-1} + BOP_t$$

$$GDEBT_t \quad = \quad GDEBT_{t-1} + DEF_t$$

$$FDEBT_t \quad = \quad FDEBT_{t-1} + KA_t$$

Notation

Y^{ad}, Y	GDP demand
Y^{as}	GDP supply at the given level of the real wage
Y^{fe}	GDP level consistent with full employment of labor
NI	National income
L^{ad}, L	Employment consistent with GDP demand
L^{as}	Employment consistent with GDP supply
L^{fe}	Labor force
C_p, C_g	Consumption by, respectively, the private sector and general government
I_p, I_g	Fixed investment by, respectively, the private sector and general government
I_{inv}	Planned inventory investment
X	Exports of goods and non factor services
M	Imports of goods and non factor services
NFI	Net factor income from abroad
CA	Current account balance
KA	Capital account balance
BOP	Overall balance of payments (increase in net official reserves)
T	Government revenues
TR	Transfers and other government payments
Sp, Sg, Sf	Saving by, respectively, the private sector, general government and the foreign sector
Y*	Index of world market size
p	Real effective exchange rate (using GDP deflators)
Dp	Rate of appreciation of real effective exchange rate (in percent)
P	GDP deflator
DP, DP^e	Inflation rate, expected inflation rate (in percent)
P*	Rest of world GDP deflator
E	Nominal effective exchange rate index (foreign currency units per unit of domestic currency)
w	Real product wage ($= W/P$)
W	Nominal wage
K	Stock of real fixed capital
M	Stock of money (M3 definition)
RES	Stock of external reserves
GDEBT	Stock of general government debt
FDEBT	Stock of foreign debt

V. The Financial Rand

1. Introduction

While the rand is largely convertible for current transactions, South Africa has generally maintained tight control on outflows of resident-owned capital and a more liberal control over nonresidents' ability to repatriate South African capital. Until 1961, the controls on nonresident transfers affected only transfers out of the sterling area; after this date they were extended to cover all transfers out of the rand area countries. Subsequently, controls on the outflow of resident capital have remained tight while the controls on nonresident transfers have evolved into the financial rand system, a secondary exchange market which is now one key link between South Africa and world capital markets. South Africa's capital controls are summarized in the Annex to this chapter.

Essentially the financial rand system has the effect of segmenting the market for portfolio capital by creating a sub-market which can be termed the "financial rand pool," made up of eligible securities and bank deposits held by nonresidents. The financial rand system allows individual nonresidents the flexibility to sell South African assets so long as a nonresident buyer can be found; in addition it provides a market mechanism-- the freely floating financial rand exchange rate--to bring the demand for nonresident-owned capital in line with supply. In this way the balance of payments--and external reserves--are insulated from the effect of nonresident capital movements, which are reflected instead in changes in the financial rand exchange rate.

The financial rand has more in common with the dual exchange rate systems operated by a number of European countries during the 1970s than with the--often illegal--parallel market systems in countries where overvalued exchange rates result in exchange controls for current transactions.

Five main operational features of the financial rand system can be identified. First, nonresidents selling eligible securities are required to deposit the proceeds in a financial rand account. 1/ Second, access is normally for nonresidents only. The South African Reserve Bank may, however, redesignate residents' commercial rand balances as financial rand. While a number of large redesignations have taken place, this practice has been discontinued. Third, financial rand deposits, held at commercial banks, are created when a nonresident sells a South African security to a resident, since the proceeds of the sale are deposited in a financial rand account; symmetrically, financial rand deposits are destroyed when a nonresident buys a security from a resident. Fourth, financial rand are traded on the Johannesburg Stock Exchange (JSE), where they sell at a

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1/ For an account of what securities are eligible, see Section 3 below.

discount relative to the commercial rand exchange rate (Chart 10). 1/ An arbitrage condition also ensures that the exchange rate for the financial rand also equals the sterling value of a given stock on the London Stock Exchange divided by the rand value of the same stock on the Johannesburg Stock Exchange. Fifth, the income earned on financial rand assets may be remitted through the commercial rand market. 2/ This is the key feature which allows movements in the financial rand exchange rate to affect the yield (measured in dollars) on portfolio assets and bank deposits and thus to clear the nonresident segment of the securities market. Put differently, it provides the price incentive that persuades nonresidents to hold the given stock of nonresident securities and deposits.

In characterizing the financial rand market it is useful to distinguish between financial rand deposits, which are interest-bearing accounts at commercial banks, and the "financial rand pool," which may be defined as the stock of financial rand deposits plus all nonresident-held portfolio assets which, if sold to a resident, would result in the creation of financial rand deposits. The financial rand "market" is properly thought of as a market that embraces all assets in the pool, not just bank deposits. Clearly, the stock of financial rand deposits is not fixed; indeed, when the system was established there were no financial rand deposits, thus the current stock (about R 7 billion) represents the proceeds of subsequent sales of portfolio assets. The size of the financial rand pool is by contrast fixed, aside from the effect of capital gains and losses and certain exceptional transactions. A nonresident sale of stock, for example, results in a creation of a financial rand deposit of equal size, leaving the pool unchanged. In addition, the size of the financial rand pool has been augmented on a number of occasions since 1985, notably by allowing debts in the standstill net to be repaid through financial rand and by redesignating commercial rand to financial rand for direct investment abroad by some South African corporations. In addition, the size of the pool is affected by South African Reserve Bank (SARB) intervention in the financial rand market and by some emigrant outflows.

2. Evolution of the financial rand

The origins of the current financial rand system in South Africa lie in efforts to stem the rate of capital outflow following the 1960 Sharpeville incident. Under regulations introduced at that time, proceeds from the sale of nonresident assets for which approval to purchase foreign exchange was not granted were designated "blocked rand." Blocked rand could be deposited in special accounts within the banking system or used by nonresidents to purchase shares traded on the Johannesburg Stock Exchange, which could be sold, at a discount, to another nonresident for foreign exchange on world

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1/ A premium cannot arise because nonresident investors have the option of buying rand at the commercial rate.

2/ This includes interest on deposits and securities as well as dividends and profits on quoted equity securities.

capital markets. In addition, blocked rand could be used by nonresidents to purchase government and parastatal bonds. At maturity, the proceeds of these bonds could be transferred overseas in commercial rand, provided they had been held continuously for five years. 1/ In February 1976, a distinction was introduced between emigrant funds (henceforth denoted "blocked rand") and nonresident funds arising from the sale of South African assets (denoted "securities rand") to enable direct transfer of securities rand among nonresidents.

In January 1979, following interim recommendations by the de Kock Commission, the "securities rand" was renamed the "financial rand." In addition to the previous arrangements, nonresidents were permitted to use financial rand to acquire nonquoted equity in South African companies. This change was designed to correct an imbalance between the supply of securities rand, which could arise from the sale of a South African asset by a nonresident, and demand for securities rand, which previously could arise only from nonresident investments in quoted securities and public sector bonds. The incentive for nonresidents to invest in South Africa was enhanced by allowing dividends and profits from nonquoted equity investment to be transferred in commercial rand.

At the same time, three changes in the regulations were introduced, which deepened the financial rand market: (i) approved foreign direct investment by South African companies could be routed through financial rand; (ii) emigrants could transfer a limited quantity of funds through redesignation by the Reserve Bank of bank deposits as financial rand; and (iii) the Reserve Bank was permitted to intervene in the financial rand market.

In February 1983, in response to an increased supply of foreign exchange, the financial rand mechanism was abolished and nonresidents were permitted to transfer the proceeds of all asset sales in commercial rand. This step was in line with the de Kock Commission's recommendation that over time South Africa move toward a unitary floating exchange rate system subject to Reserve Bank intervention. Controls on capital transfers by residents remained in place.

In August 1985, following the refusal of a number of international banks to roll over short-term loans to South African borrowers, South Africa declared a moratorium (the "Debt Standstill") on repayments pertaining to more than half its international debt obligations. In September 1985, the financial rand mechanism was reintroduced in the same form as had previously existed although, until August 1986, nonresident investment via financial rand in nonquoted equity was restricted to investment in the manufacturing sector. In March 1988, a 10 percent withholding tax levied on income from nonresident holdings of public sector securities was abolished. In August

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1/ After March 1978, the proceeds were transferable at the securities rate, rather than the commercial rand rate.

1989, the use of financial rand for purchases of residential property, which had been allowed since August 1986, was prohibited.

In January 1988, under the Second Interim Arrangement covering loans subject to the Debt Standstill, international banks were given the option of converting the value of the U.S. dollar principal owed to them into financial rand. Like other holdings, the financial rand obtained could then be sold to another nonresident for foreign exchange on the spot market. The rate used to convert the U.S. dollar principal into financial rand was the commercial rand rate, implying a capital loss equal to the discount between the financial and the commercial rand rates. This option was maintained under the Third Interim Arrangement and in the recent Final Arrangement announced in September 1993.

In March 1992, the Reserve Bank announced that it would begin to intervene in the financial rand market. This decision was taken at a time when the official reserve position was again strengthening, and domestic money market conditions were liquid. The Reserve Bank viewed purchases of financial rand as a way of draining liquidity from the banking system. However, South Africa's reserves began to deteriorate shortly thereafter, and intervention appears to have been limited to efforts to stabilize, rather than to alter, the financial rand rate. 1/

In mid-1992 the Reserve Bank authorized a number of major South African companies to redesignate commercial rand accounts as financial rand to be used for direct investment abroad. 2/ Although these resident-owned financial rand deposits were extinguished when the direct investment was effected, the redesignation did have the effect of increasing the size of the financial rand pool. The increase in supply caused the financial rand discount to widen (Chart 10). The redesignations of commercial to financial rand came under criticism by market participants because they were seen as unfairly diminishing the rates of return earned by financial rand investors. Insofar as the redesignations permitted resident-owned capital to leave the country, they also ran counter to the spirit of the financial rand system. 3/ Thus, in November 1992 the Government announced that companies wishing to invest abroad would no longer have access to the financial rand and would instead have to finance their investments by raising capital abroad.

1/ Since financial rand purchased by the Reserve Bank are not reincorporated into the domestic monetary system, intervention by the Reserve Bank uses foreign reserves to finance capital flows which are supposed to be separated from the rest of the balance of payments. Intervention thus defeats the principal object of the financial rand mechanism.

2/ The largest of these transactions was the purchase of Del Monte by Anglo-American and Royal Foods, for more than R 600 million.

3/ However, they did not cause any loss in external reserves.

CHART 10
SOUTH AFRICA

FINANCIAL AND COMMERCIAL RAND EXCHANGE RATES, 1979-93

EXCHANGE RATES
(in rand per U.S. $)

Financial Rand

Commercial Rand

FINANCIAL RAND DISCOUNT
(in percent)

Source: South African Reserve Bank, Quarterly Bulletin.
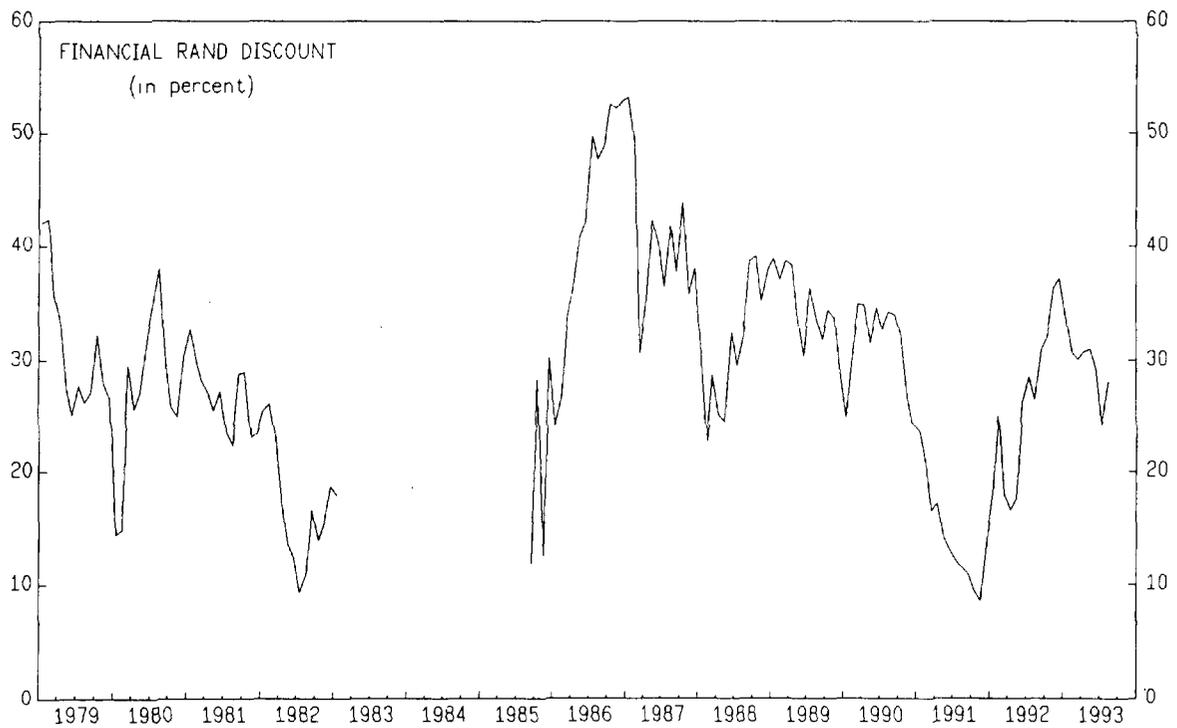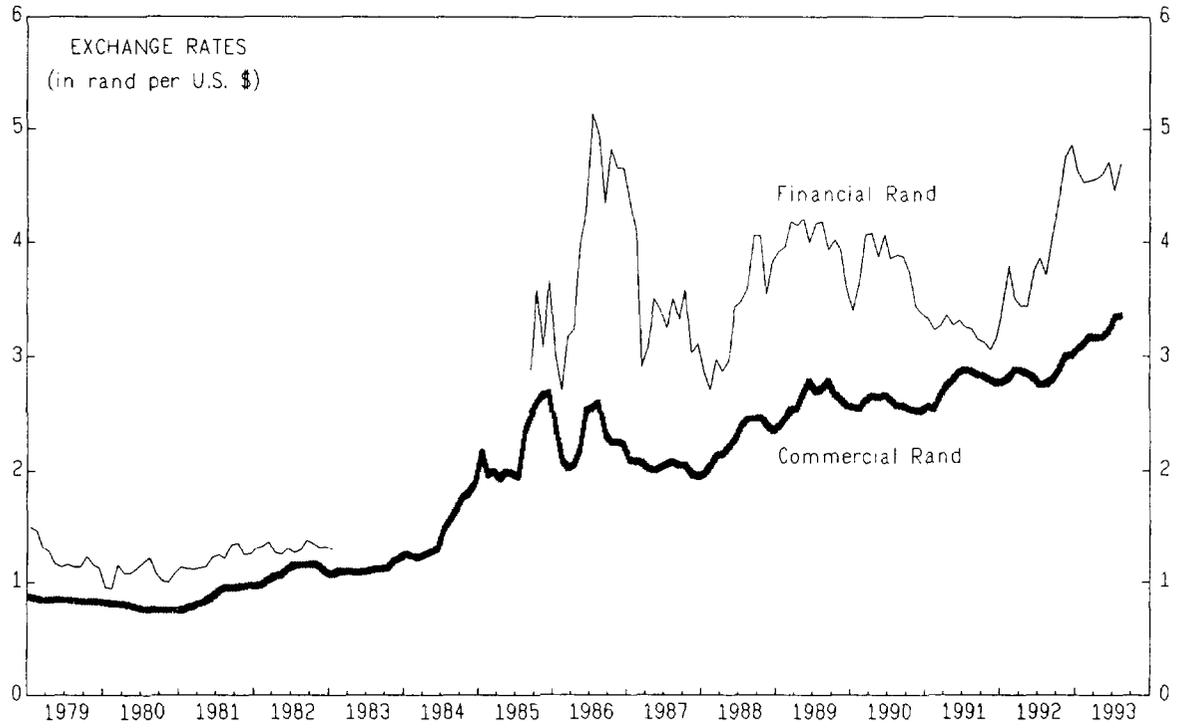
3. The components and size of the financial rand pool

The components of the financial rand pool are not homogenous but are stratified in terms of liquidity. The most liquid components of the market are nonresidents' spot balances (financial rand deposits) and holdings of securities, although less liquid assets such as direct investment and debt under the standstill can also broadly be considered components of the market. These components are described below. An estimate of the magnitude of each component at December 1992 is also provided, although comprehensive data are not available and several estimates are, strictly speaking, upper bounds. 1/

Balances at deposit-taking institutions. The most liquid portion of the market is nonresident financial rand balances held with 19 licensed South African banks, and limited quantities of spot balances held by the banks and by securities firms that trade in financial rand. In December 1992, deposits with commercial banks peaked at R 7.3 billion (US$1.5 billion), up from R 2.6 billion a year earlier (Chart 11).

The total daily turnover in the financial rand market is reported to be R 250 million, most of which represents equity and debt securities business rather than the exchange of financial rand deposits. The market is sufficiently thin that a net buyer or seller of more than R 10 million in securities can move the rate. For large transactions, brokers are generally unwilling to hold stock on their own books due to the volatility of the financial rand rate, and it appears that a matching sale (purchase) generally has to be found to counterbalance an order.

In principle, there may also be resident financial rand balances that have been redesignated from commercial rand. Since redesignations are generally made in order to effect specific transactions, the balances in question are probably negligible.

Nonresident holdings of government and parastatal debt. The next most liquid component of the market is nonresident holdings of certain government and public enterprise fixed-interest, rand-denominated securities. While data on nonresident holdings of government debt are not available, it is believed they may make up some 80 percent of the holdings classified by the South African Reserve Bank as held by "other identified owners" (Chart 12). With respect to the debt of nonfinancial public enterprises, the gross amount owned by nonresidents includes the category "nonresident holdings" and the part of holdings by "other companies" which represents foreign holdings through nominee companies. On the assumption that large portions of the two "other categories" are in fact nonresident, it would appear that this portion of the financial rand pool has grown rapidly in recent years. It may have grown from around R 10 billion in mid-1989 to around

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1/ The South African Reserve Bank is in the process of enhancing its statistical coverage of the financial rand data.

R 58 billion by end-1992 (Chart 12). 1/ On this basis, nonresidents may have funded as much as 70 percent of the total central government and public enterprise debt issued during the period.

Nonresident holdings of quoted equity securities. Nonresident holdings of quoted equity (but not debt) securities can be purchased in financial rand, while dividend and profit payments are transferred in commercial rand. Around fifty stockbrokers in South Africa deal in financial rand on behalf of nonresidents. At December 1992, the book value of the stock of nonresident holdings amounted to R 7.6 billion, up from R 6.4 billion at end-1985. Using a market:book ratio of 3:1 (in line with historical trends), the market value of the stock of nonresident quoted equity holdings at December 1992 was around R 23 billion. 2/

Loans frozen under the debt standstill. A further component of the financial rand pool is foreign commercial loans subject since 1985 to the debt standstill. The quantity of financial rand deposits increases when the conversion option is exercised. Leape (1990) estimates that in the two years to end-1989, US$600 million of loans exited the standstill net using the financial rand conversion option. The final debt arrangements cover debt amounting to an estimated US$5 billion, all of which could be converted into financial rand. Therefore these debts are in principle part of the financial rand pool 3/

Nonresident holdings of nonquoted equity. The least liquid component of the market is nonresident, nonquoted equity investment in South Africa. As for quoted equity, nonquoted equity investment is made in financial rand, while approved dividends and profits are transferred in commercial rand. 4/ Their book value amounted to R 24.5 billion at December 1991 (up from R 18 billion in 1985) implying a market value of around R 74 billion.

Table 10 summarizes the quantifiable components of the market, ranked by liquidity. Summing these components puts an upper limit on the size of the financial rand market at around R 179 billion (approximately US$37 billion) at end-1992. Of the total, R 88 billion is held in the most liquid forms (deposits with banks, holdings of government and public debt issues, and quoted equity investments). Approximately 0.3 percent (R 0.25 billion) of the total liquid financial rand is traded daily.

1/ Assuming all items listed as "Other identified" and "Other companies" by the Reserve Bank under ownership of short-term and long-term debt are foreign holdings.

2/ Flow data calculated using figures from the Johannesburg Stock Exchange indicate net sales by nonresidents of R 4.5 billion in 1990, R 4.1 billion in 1991, and R 0.5 billion in 1992.

3/ The final arrangements include a provision for an alternative debt-equity swap mechanism in the event the financial rand is abolished.

4/ Long term loan capital must be introduced and repaid at the commercial rand rate (Exchange Control (1990), page R4).

CHART 11
SOUTH AFRICA
FINANCIAL RAND DEPOSITS, 1991-93
(millions of rand)

Source: South African Reserve Bank, Quarterly Bulletin.

- 76a -
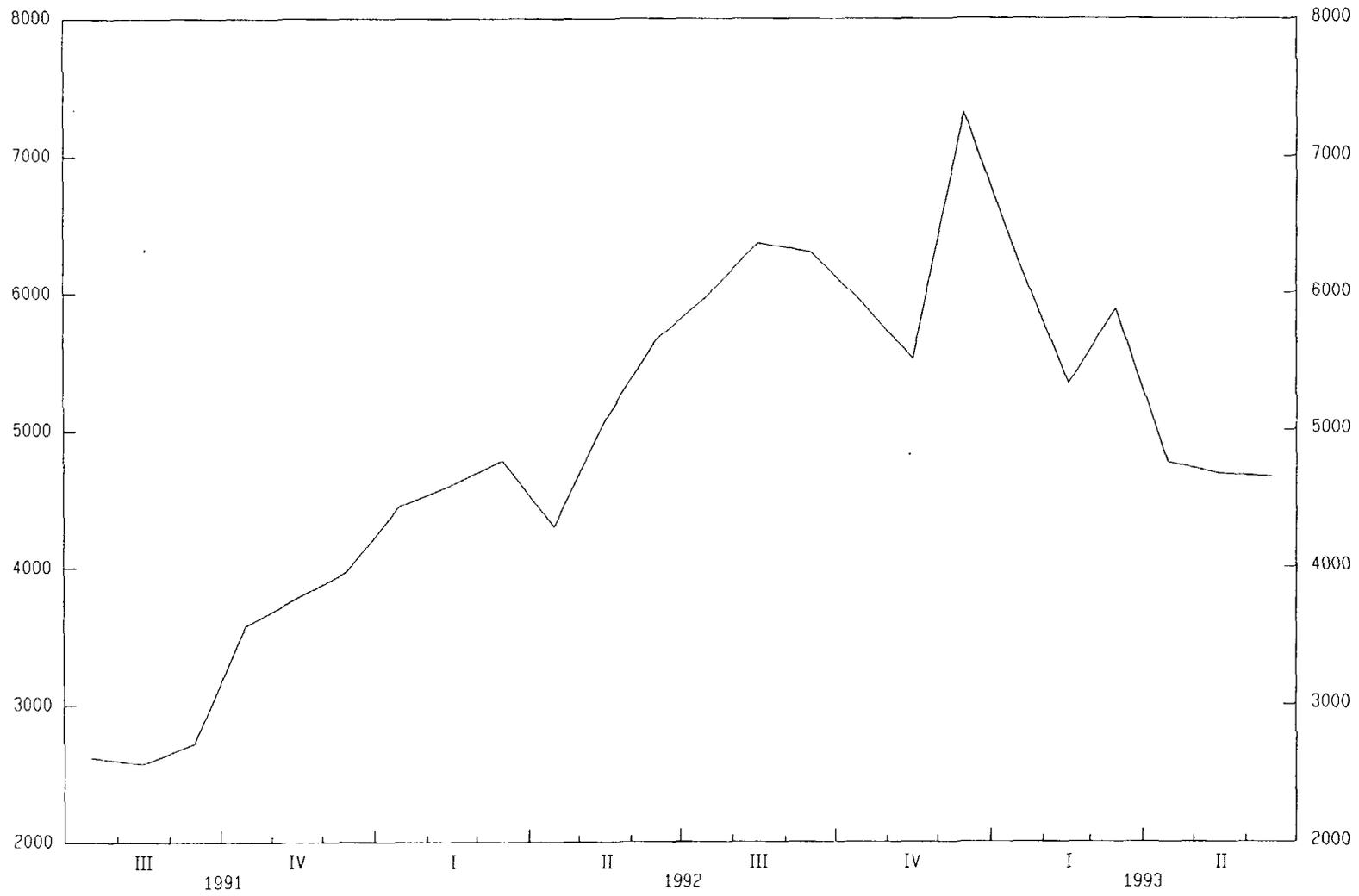
CHART 12
SOUTH AFRICA

OTHER OWNERS OF CENTRAL GOVERNMENT AND PARASTATAL DEBT, 1985–93

DOMESTIC MARKETABLE STOCK DEBT OF GOVERNMENT
(in millions of rand)

Long term

Short term

MARKETABLE DEBT OF NONFINANCIAL PUBLIC ENTERPRISES
(in millions of rand)

Owned by "other companies" 1/

Owned by nonresidents 2/
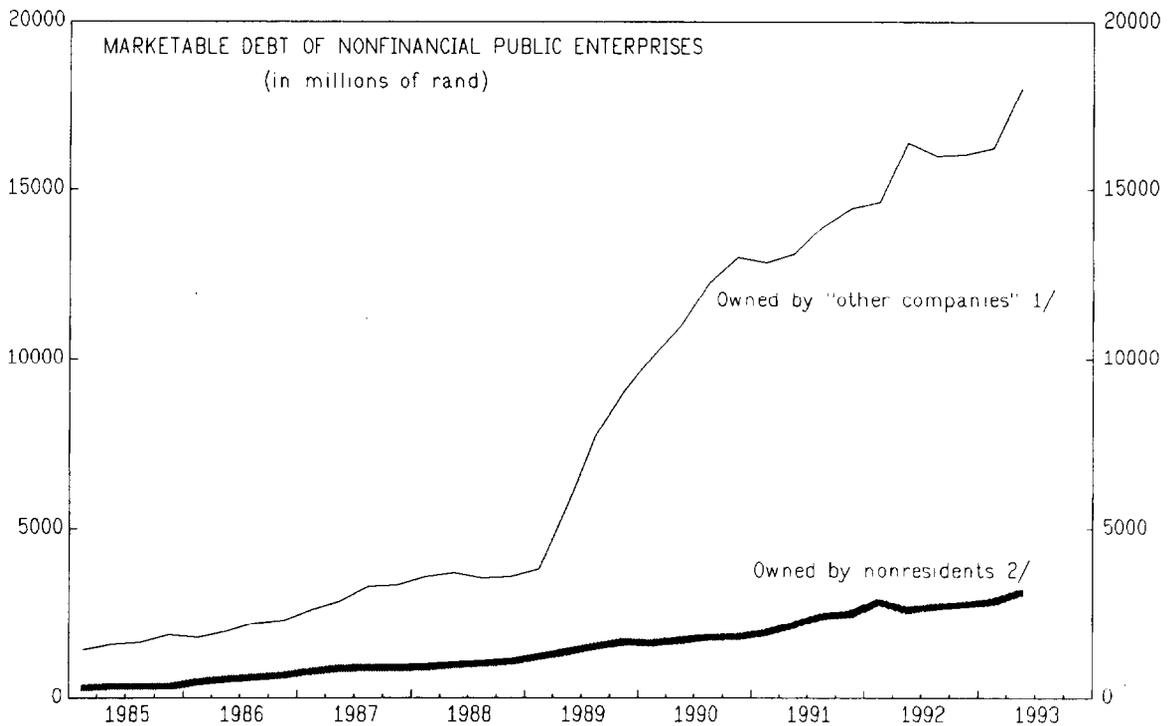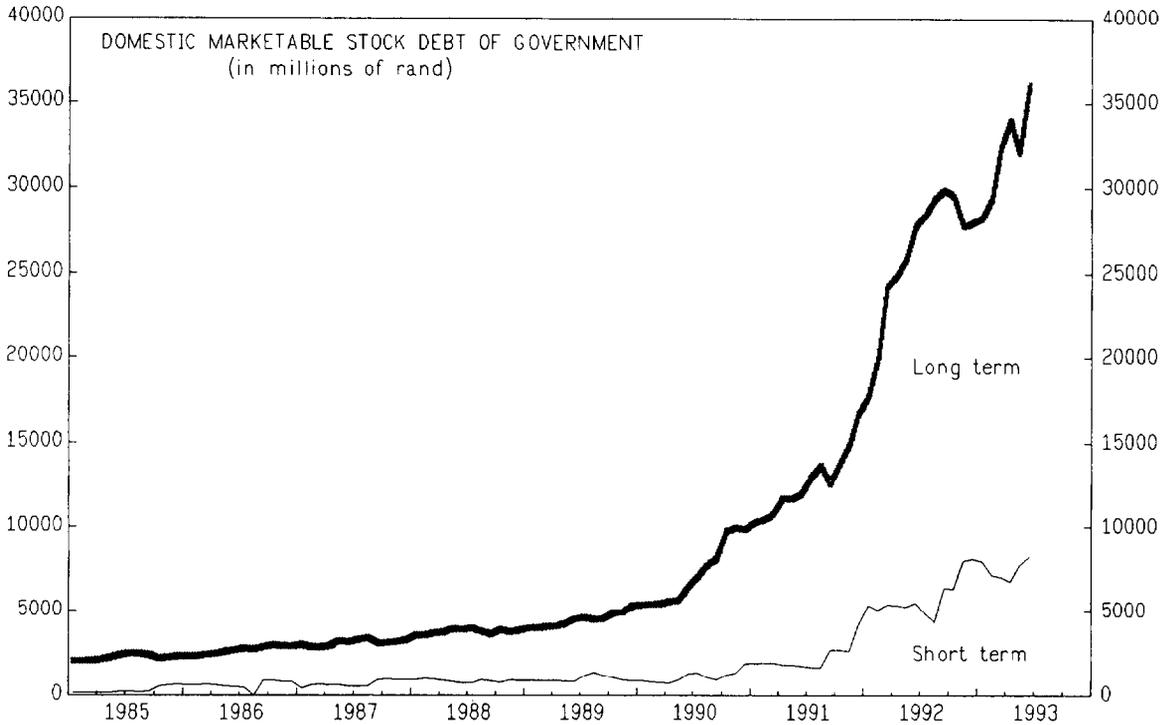
1/ Including nominee companies.
2/ Excluding nominee companies.

Source: South African Reserve Bank, Quarterly Bulletin.

Table 10. South Africa: Size of the Financial Rand Pool at End-1992

	Amount in billions of rand	As percent of total
Balances on deposit with banks	7	4
Government and public enterprise debt issues 1/	58	32
Quoted equity investments	23	13
Loans trapped in the Debt Standstill 2/	17	10
Unquoted direct equity investments 3/	74	41
Total	179	100

Sources: South African Reserve Bank, Quarterly Bulletin; LSE Centre for the Study of the South African Economy, Quarterly Report; International Monetary Fund, International Financial Statistics; and staff estimates.

1/ A maximum estimate.
2/ Total amount that could be converted to financial rand.
3/ Estimate for December 1991.

4. Relative interest rates and risk premia

It was noted above that the financial rand mechanism provides an incentive to invest in South Africa because principal is invested via the financial rand exchange rate while dividends and interest are transferable at the commercial rand rate. In this section the yield in dollar terms on nonresident investment in South African Government bonds through the financial rand mechanism is compared with that on investment in comparable U.S. treasury bonds.

The yield in U.S. dollar terms of an investment through the financial rand can be expressed as:

$$r_{US} = r_{SA}(1+ec)/(1-disc) + ef$$

where
r_{US} is the nominal interest rate expressed in U.S. dollars
r_{SA} is the nominal interest rate expressed in rand
ec is the expected rate of appreciation of the commercial rand
ef is the expected rate of appreciation of the financial rand
$disc$ is the current financial rand discount (a positive number).

The first term on the right hand side shows how the expected yield from an asset purchased with financial rand but paying interest in commercial rand is enhanced by the financial rand discount. The second term shows the capital gain (or loss) from movements in the financial rand rate.

Using a variant of this equation for a three-year holding period, calculations were made for the ex-post yield in U.S. dollars from a three-year investment in South African government bonds between January 1980 and

August 1993. 1/ The yield in dollar terms on an investment through
financial rand may be compared with that from a three-year U.S. Treasury
bond (Chart 13). On average for the whole period, the return from South
African government bonds was lower and considerably more volatile than that
from U.S. Treasury bonds: the average annual return on a three-year
investment in South African bonds was 6.9 percent compared to 10.1 percent
on U.S. bonds, while the standard deviation of the return on South African
bonds was 15.4 percent compared with 2.5 percent for U.S. bonds. However,
Chart 13 indicates it is mainly early in the observation period that returns
on South African bonds were below those on U.S. bonds (negative 4 percent
compared to positive 12 percent). During this time, real interest rates on
South African bonds were negative and the commercial rand and financial rand
were depreciating sharply. Since late 1988, three years after the
reintroduction of the financial rand, the situation has been reversed, with
returns on South African government bonds exceeding those on U.S. Treasury
bonds. In particular, between September 1988 and August 1993, the average
annual return on South African bonds was 19.2 percent compared with
8.0 percent on U.S. bonds, while their standard deviations were 7.5 percent
and 0.8 percent, indicating that excess return and risk on South African
bonds have become positively correlated in recent years. 2/

5. Costs and benefits of the financial rand

The main benefits flowing from the financial rand mechanism are the
following. First, under the mechanism, South Africa's reserve position is
insulated from the effects of net outflows of nonresident equity and public
bond holdings because each outflow must be matched by an inflow.

Second, and related to the first point, the financial rand mechanism
reduces the volatility of the commercial rand rate in comparison with a
unified exchange rate regime, lessening uncertainty for exporters and
importers. In the two-and-a-half-year period between February 1983 and
September 1985, when the exchange rate was unified, the variance of the
commercial rand rate was around double that during the two-and-a-half-year
periods preceding and following the reform. Furthermore, the standard
deviation of the financial rand since its reintroduction in September 1985
has been 1.7 times the standard deviation of the commercial rand, an
indication of the extent to which the financial rand market has absorbed
volatile shifts in the capital account.

1/ January 1980 was chosen for reasons of data availability. It is
assumed there was no reinvestment of interest payments.

2/ Econometric estimates indicate that the real interest differential is
a significant negative determinant of the size of the discount between the
financial and the commercial rand rates. See Garner (1993).

CHART 13
SOUTH AFRICA

YIELDS ON SOUTH AFRICAN AND U.S. BONDS, 1983-93

(annual, in percent)

Three year U.S. Treasury bond

Three year South African Government bond 1/
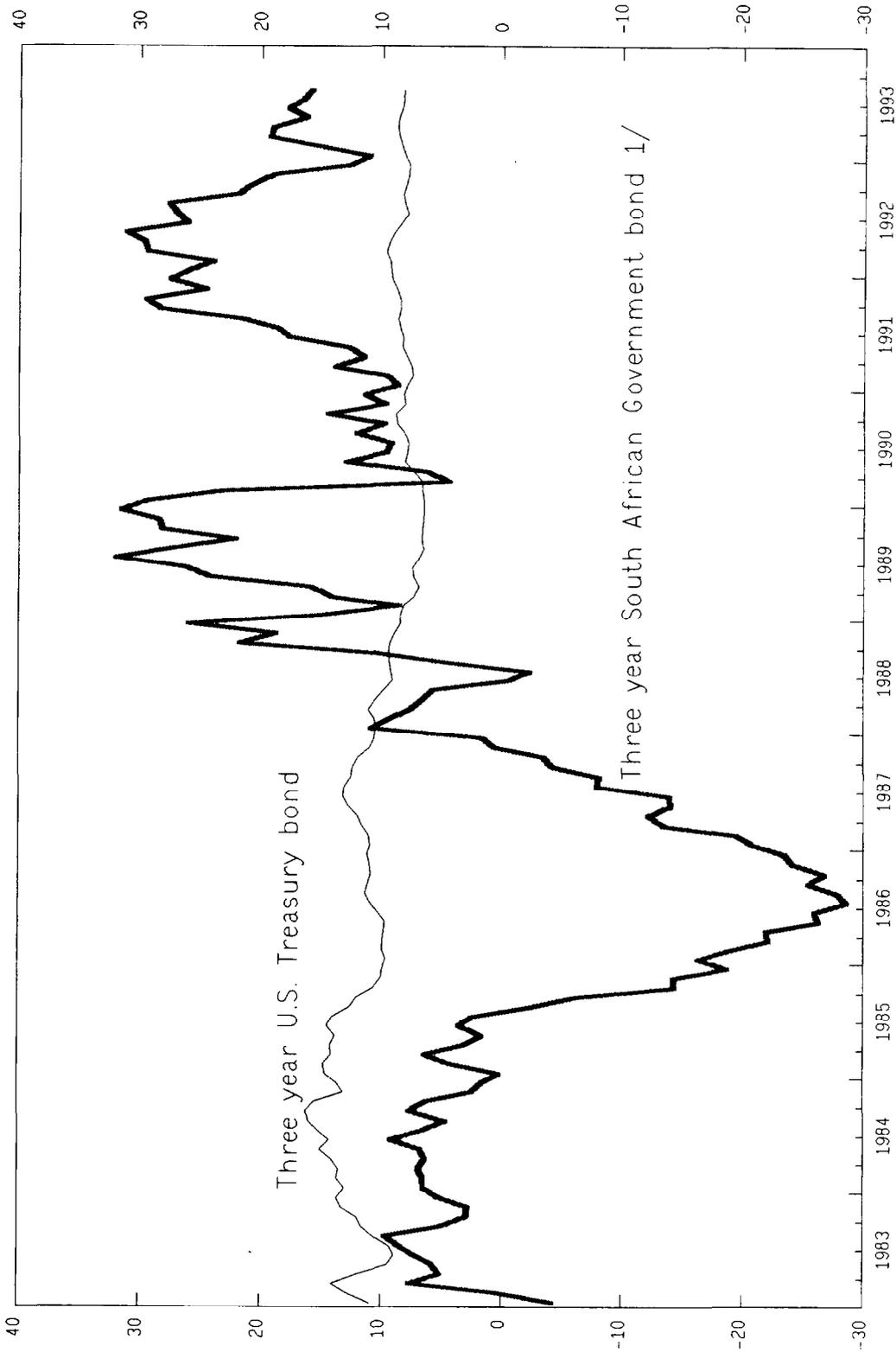
1/ Yield expressed in U.S. dollar equivalent.

Source: IMF, International Financial Statistics; and staff estimates.

Third, the mechanism achieves these gains in a manner that is much less rigid than exchange controls, since it gives individual nonresidents the freedom to re-allocate their portfolios, and even to withdraw capital from South Africa.

The financial rand mechanism also imposes economic costs, however. First, the price of commercial rand is not a market price for foreign exchange because it reflects only trade flows and a small subset of capital flows. Put differently, the dual market inserts a distorting wedge between the world price of capital relative to goods and the corresponding domestic relative price. In particular, the financial rand mechanism overvalues commercial rand in comparison with a unitary exchange system, thereby introducing an anti-export bias in South African trade and industrial policy.

Second, because financial rand can be used for purchases of government and parastatal debt securities and corporate equities but not for corporate debentures, a distortion is created in the domestic capital market. Nonresidents hold a disproportionately large share of government debt relative to other investments because of their ability to invest in financial rand yet receive interest in commercial rand. This has probably increased the price of long-term public securities and lowered the market interest rate relative to what would prevail in the absence of the financial rand mechanism. However, to the extent that the two classes of securities are substitutable in residents' portfolios, this distortion will have been arbitraged away and therefore is probably of secondary significance relative to the distortion introduced in the price of foreign exchange.

Third, the financial rand mechanism encourages fraud by setting two prices for the same commodity. The importance of leakage between the exchange markets in the context of South Africa is difficult to assess. In one form or another the mechanism has been in operation for all but two of the last thirty years and there are frequent reports in the South African press of illicit use of financial rand by residents and nonresidents to evade capital controls. One way this is achieved is when a company, which is a subsidiary of an overseas concern, pays a dividend that is transferred abroad in commercial rand. The dividend can then be reinvested in the local company via equity financing through financial rand. Alternatively, equity capital invested via financial rand can be transferred back to the parent company in commercial rand through overinvoicing of imports (for further discussion see Gidlow (1979)).

In time, as the current transitional uncertainties are reduced, the benefits flowing from the dual system (such as reducing the volatility of the commercial rand rate and preventing capital flight) will decline relative to the costs of distortions introduced in the costs of foreign exchange and capital. This suggests a prima facie case for an eventual abolition of the financial rand mechanism.

6.   Lessons from the 1983-85 unification

    In February 1983 the financial and commercial rand were unified. For nonresidents the rand became fully convertible, at the commercial rate, for all current and capital transactions. The capital controls on transactions by residents were maintained but it was announced that they would be removed at some (unspecified) date in the future. The decision to unify the market was made in light of a R 3.6 billion increase in reserves, owing to improvements in both the current and capital accounts of the balance of payments, a real appreciation of the commercial rand, and a strong performance of the Johannesburg Stock Exchange. There is evidence that the unification took markets by surprise: while the financial rand discount had reached a low of 10 percent in late 1982, it increased during the five months before unification to a little under 20 percent on the eve of the unification.

    The reform was abandoned, and the financial rand was reintroduced, on September 1, 1985, in the face of the balance of payments crisis precipitated by commercial banks' refusal in August to continue rolling over South Africa's bank debt. However, there are indications that the unified rand was under pressure from very early on. In an attempt to protect the value of the rand the South African Reserve Bank ran down the stock of net reserves, which fell from the equivalent of six weeks of import cover in January 1983 to three weeks of cover two months later. Nonetheless, and in spite of rising nominal interest rates, the rand depreciated by some 40 percent (in dollar terms) during 1983-84 (that is, the depreciation was larger than the pre-unification financial rand discount) before stabilizing in early 1985.

    The lessons for a future unification are straightforward. A unification starting from conditions where the discount is high will cause some combination of higher domestic interest rates, a (possibly large) depreciation of the commercial rand, and a loss of reserves. A large initial stock of reserves could be used to cushion the effect on interest rates and the nominal exchange rate; however, the Reserve Bank is unlikely to be in a position to offset fully the large portfolio shifts caused by a removal of the interest rate subsidy provided to nonresidents through the financial rand. This is not to imply that unification will not be feasible. Once confidence is restored in the competitiveness of the South African economy and the sovereign risk associated with investment is perceived to abate, the financial rand discount should again decline to modest levels. In these circumstances, unification should be possible since it would be supported by high rates of return on South African investments.

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South Africa's Capital Controls

(references are to sections of the "Exchange Control Manual" of October 1990)

Direction of original flow / Type of capital transfer	From residents	From non-residents
Direct investment (1)	i) No outward investment allowed for individuals (6.1.2.1) ii) Outward investment by companies is considered by Exchange Control in light of national interest. Annual financial statements are to be submitted. All net income is to be repatriated except with special permission. All share capital is to be transferred through the financial rand. (6.1.2.1, 6.1.2.3, 6.1.2.5(b))	i) Investment may be made and disinvestment must be made using the financial rand. Exchange Control approval is needed. Purchases of residential property, farms, and items other than fixed assets are forbidden. Profits and dividends are transferred with commercial rand. Foreign companies have stipulated gearing requirements. (6.2.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.2.3.6, 6.2.3.8). ii) Investment in other Common Monetary Area countries with financial rand is allowed, but a detailed application must be made to Exchange Control. (6.2.3.10)
Portfolio investment (2)	i) No outward investment is allowed, except a small allowance in financial rand to take up rights on shares already owned. (6.1.4) ii) New purchases of foreign currency bonds by South African residents, like all other purchases of foreign capital assets, are subject to Exchange Control approval, which does not appear normally to be given. Interest on existing holdings must be repatriated. (6.1.1)	i) Quoted securities (including government and parastatal fixed interest stocks, but not corporate debentures) may be purchased with financial rand without Exchange Control approval. Quoted securities are endorsed "non-resident" to prevent their sale outside the financial rand mechanism. When they are sold funds must be deposited in a financial rand account. Dividends and interest are paid in commercial rand. (6.2.3.4, 6.2.3.5, 6.2.3.7, 6.2.4, 6.2.4.6(b)) ii) Purchases of unquoted securities need Exchange Control approval. For those in new companies, the expansion of manufacturing capacity and low gearing will be viewed favorably. Profits and dividends are paid through commercial rand. (6.2.3.4,6.2.3.8,6.2.4) iii) Switches from quoted to non-quoted securities are not allowed. Sales of securities must be credited to a financial rand account. (6.2.4.6 (b)). iv) Public sector foreign currency bond debt was excluded from the Debt Standstill of end August 1985. Repayments of principal and interest have been made normally. (6.1.8.1)

South Africa's Capital Controls (continued)

(references are to sections of the "Exchange Control Manual" of October 1990)

Direction of original flow / Type of capital transfer	From residents	From non-residents
Bank Loans (3)	i) Bank loans from residents to non-residents are subject to Exchange Control approval, which is usually only given if related to approved inward investment by a non-resident company. All flows take place in commercial rand (6.1.3).	i) Repayment of all bank loans outstanding at end August 1985, and not guaranteed by a foreign government or export credit agency, were halted and have been subject to the Debt Standstill. Under various interim arrangements, some repayments on these loans have been made, and, at the creditors' option, some loans have been converted to long term loans not subject to the Debt Standstill, and some have been repaid in financial rand. Interest has always been paid on time in commercial rand. (6.1.8.1, 6.1.8.3).
	ii) Non-resident wholly owned subsidiaries may borrow locally up to 50% of their shareholders investment (equity, profits, and loans from abroad). Where the company is not wholly owned, the greater the local interest is in the company the more can be borrowed: (50% + ((SA %/ FOR%) * 50%). This regulation applies also where guarantees are given by non-residents. However, Exchange Control will allow excess facilities under some circumstances and if local interest is more than 75%, the company is no longer affected by this regulation. Loans can be made by authorized dealers but must be reported to Exchange Control. All flows take place in commercial rand. (6.2.1.1, 6.2.1.3, 6.2.1.5, 6.1.2.7)	ii) New non-resident bank loans to South African residents require prior approval from Exchange Control (except for trade finance) to avoid bunching of loan maturities, but are normally approved. Longer maturity loans are welcomed, and early repayment is not generally allowed. Working capital loans of less than 3 months are not approved. Facilities may not be extended without approval. Capital and interest flows are made in commercial rand (6.1.7, 6.1.7.3)

iii) Repayments on loans from a foreign bank to finance a South African firm's overseas subsidiary must be made with financial rand if they were for capital expenditure; if they were for current expenses they should be repaid with profits generated overseas, or with Exchange Control approval from the parent using commercial rand. (6.1.2.5(e)(i) and (ii). |
| | iii) See the discussion of trade finance below for rules affecting bank's provisions of loans relating to trade flows. | |
| Bank Deposits (4) | (i) It appears that South African residents are allowed to hold overseas bank deposits, but all interest must be transferred to the Common Monetary Area. (See rules on immigrants flows). All new acquisitions of capital assets, and hence new bank deposits, outside South Africa require Exchange Control approval (6.1.1, 6.2.6.3 (b)). | i) Investments with authorized South African banks can be made with financial rand without Exchange Control approval. Interest appears to be payable in commercial rand. (6.2.3.4) |

Direction of original flow / Type of capital transfer	From residents	From non-residents
Other loans (5)	i) Appear to be covered by the same restrictions as bank loans. (See rules on bank loans). (6.1.3)	i) Loans made before end-August 1985, which were not from or guaranteed by a foreign government or export credit agency, have been subject to the Debt Standstill (see rules on bank loans above) (6.1.8.1, 6.1.8.3) ii) Loans from non-resident shareholders to South African companies may not be made without Exchange Control approval. Equity must generally exceed 1/3 of borrowings where the company is non-resident controlled. Loans from non-residents increase local borrowing capacity of company. (See rules on residents bank loans above). (6.1.7.3) iii) Loans from other non-residents appear to be treated as bank loans.
Migrants flows (6)	i) Emigrants are permitted a cash allowance (R 15,000) in commercial rand, equal to the annual travel allowance, and a settling in allowance (R 100,000) in financial rand. They are also allowed to export certain items, with value up to R 100,000, so long as they have been held for one year. (6.2.5.4) ii) If am emigrant's net declared total assets in South Africa, excluding allowances, are more than R 200,000, or application to export further assets is made, approval must be sought from Exchange Control (6.2.5.6) iii) Remaining assets are held in a "blocked account" with an authorized dealer, and may only be used for expenses incurred in South Africa (taxes, travel etc.) Income from these assets can be remitted overseas up to a maximum of R 300,000. Transfer can be in commercial or financial rand at Exchange Control's discretion. (6.2.5.8,6.2.5.9,6.2.5.12).	i) Immigrants taking up permanent residence in South Africa must declare to an authorized dealer any foreign currency and assets which they own, and must keep Exchange Control informed of their ownership of foreign assets. (6.2.6.2) ii) Immigrants arriving since Sept. 1990 are allowed to dispose of or invest their foreign assets for a period of 5 years before becoming subject to Exchange Control as residents. Within one year of arrival they are allowed to introduce a maximum of R 500,000 of capital via the financial rand mechanism, to be used for the purchase of property or a motor vehicle. Other inflows are subject to the rule governing foreign investors. All income from foreign assets must be transferred to the Common Monetary Area. (6.2.6.3(b))

South Africa's Capital Controls (concluded)

(references are to sections of the "Exchange Control Manual" of October 1990)

Direction of original flow / Type of capital transfer	From residents	From non-residents
Trade finance (7)	i) A South African exporter requires approval from an authorized dealer to provide a trade finance facility with a maturity of more than 6 months. Approval from Exchange Control is required for facilities of more than 12 months. It appears that all flows take place in commercial rand. (6.1.6) ii) It appears that banks making loans to overseas importers and exporters are subject to the same regulations.	i) Trade finance originating directly from the supplier, or which was guaranteed by a foreign government or export credit agency, was not subject to the Debt Standstill of end August 1985. (6.1.8.1) ii) Foreign bank facilities for periods of not more than 12 months for financing exports from and imports to South Africa are classified as trade finance, and do not require exchange control approval. (6.1.7.3)

VI. The Trade System

South Africa's trade regime is out of line with both changed external economic circumstances and a new domestic consensus on the appropriate role of trade in growth and development. South Africa's international economic relations have changed radically in the last few weeks as domestic political and constitutional developments have elicited a lifting of trade and financial sanctions. Within South Africa this change has been foreshadowed by a shift in perceptions about the role of trade: there is now a widespread perception that the declining growth trend of recent years is attributable, at least in part, to an inward-looking trade regime, and that trade in the future must be used as an engine of growth. New trade policies will be required to capitalize on this shift in circumstances and attitudes.

Certainly, South Africa's trade regime can be fairly characterized as inward looking, with a history of excessive protection and intervention that inhibited trade in manufactures and reliance on export markets. Since 1985, trade and financial sanctions have driven the country even further toward a policy of self-sufficiency. Now, however, the authorities and the principal nongovernmental groups seem bent on restoring an export culture to South African business and establishing trade policies capable of fostering international competition. This chapter summarizes South Africa's current trade system, traces its development over the past four decades, and outlines the basic features of the proposed liberalization that is seen as part of the post-apartheid economic program.

1. Description of the import and export system 1/

South Africa is a founding member of the General Agreement on Tariffs and Trade (GATT). Some 18 percent of its tariff lines are bound under the GATT, at rates ranging from zero to 30 percent, and in some cases at specific rates of duty. Like many other members, South Africa does not yet comply with all provisions under the agreement; in particular, it provides export subsidies. Quantitative restrictions and import surcharges, which are deemed to have been imposed for balance of payments reasons, have been justified under Article XII of the GATT.

Import protection: South Africa's protective system consists of customs tariffs, quantitative import licensing, and a variety of other mechanisms. Because the protective system has been seen as an instrument of industrial development, it has been highly sensitive to the perceived needs of individual industries for protection and thus subject to frequent discretionary changes. There has also been considerable room for selective

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1/ Trade policies, including the import protection and export promotion systems, have been described in Lachman and Bercuson (1992). Detailed information and analyses can also be found in the 1993 reports by the GATT Secretariat and the Government, and in Belli, et al., (1993).

imposition of formula duties with a view to protecting domestic producers against low-cost foreign competition. 1/

The import tariff schedule comprises approximately 12,000 lines. Including the import surcharge and the ad valorem equivalent of formula duties, the nominal tariff protection of the manufacturing sector in 1989 averaged about 28 percent (Industrial Development Corporation, 1990). But, while this average level of protection is not out of line with many other developing economies, South Africa's tariff structure is extraordinarily

Examples Showing Complexity in Tariff Structure

Duty	Product	Rate
Only ad valorem duty	Printed labels used with textile machinery	10%
Only specific duty	Matches	38c/10,000 units
Specific duty as well as ad valorem duty	Uncoated wrapping paper of certain specifications	10% plus 1.15c/kg
Formula duty	Kraftliner	10% or 30c/kg less 90% of unit value, whichever is higher
Specific duty with minimum or maximum ad valorem limits	Printed paper labels	20% or 11c/kg, whichever higher
	Wallpaper of certain specifications	1.84c/kg with a maximum of 15%
	Printed folded cartons	20% or 5.5c/kg with a maximum of 30%

Source: Belli, et al., (1993), page 5

complex: it has more tariff rates than any other country, about 200 if ad valorem equivalents of formula duties are included; the range of tariffs is the widest, with rates exceeding 100 percent for 5 percent of the tariff lines and very much higher rates for some textiles and non-metal mineral products; the variability of tariff rates is significantly greater than that of most other countries, with the (normalized) standard deviation estimated at 43 percent; and products with only marginally different specifications

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1/ A description of formula duties is provided below.

could face tariff rates that vary by a factor of 9 (Belli, et al., 1993).
This makes for a system that is overly complicated and difficult to enforce.

The tariff rates generally escalate with the degree of processing: the
average rate in 1990 for primary products was 2.5 percent whereas that for
manufactures (except capital goods) was about 27 percent. In addition to
basic tariff charges (which can be ad valorem, specific, or some combination
of the two), the import surcharge, introduced in 1985 primarily for balance
of payments reasons, applies to about two thirds of the total tariff lines.
The surcharges have been reduced step by step and are at present 5 percent
(applicable to capital and intermediate goods), 15 percent (most consumer
goods), and 40 percent (luxury goods). Formula duties are intended to
forestall dumping by adding floor prices to the tariff schedules of certain
products, effectively setting lower thresholds to their import prices, 1/
but the floor prices are largely not binding as they have not been adjusted
in recent years. Formula and specific duties cover about one third of the
tariff lines.

Although quantitative import control has gradually been replaced by
tariffs, licensing remains the main instrument of control in agriculture,
forestry and fisheries, covering some three quarters of the tariff lines.
Among manufactured products, import control applies largely to processed
food, clothing, and rubber products. Overall, import licensing is required
in about 15 percent of the tariff lines or about 10 percent of the total
import value. It has been estimated that import licensing adds another 10
percent to the rate of protection (GATT Report by the Secretariat, 1993).

Effective protection is augmented in a number of circumstances by the
possibility of customs duty drawbacks and exemptions for machinery and
inputs, and the use of such schemes is widespread among protected, import-
substitution industries. In addition, specific programs directed at the
motor vehicles, textiles and clothing, and television industries have been
designed to promote local content in the manufacturing of these products, by
levying excise duty in inverse proportion to domestic value added. As such,
these measures serve primarily to protect key input industries, such as
steel: the Local Content Programme for Motor Vehicles, for example, is now
in its sixth phase, and can no longer be justified under the infant industry
argument. Finally, conditions for government procurement give preferences
to domestic suppliers, creating a margin of some 30-40 percent in favor of
locally produced goods (Naude, 1993).

1/ A formula duty is normally defined as the higher between (i) the
specified ad valorem duty, and (ii) the reference price minus the inverse of
the ad valorem duty. Thus defined, the cost to the importer inclusive of
duty is at least equal to the reference price, and the ad valorem equivalent
of the duty can be extremely high.

Tariff Structure, April 1993
(In percent)

Proportion of Tariff Lines Subject to					Base rate 1/				Effective Protection on Manufactures
Formula/ specific duties	Licensing	Surcharge	Ad valorem	Free	Max.	Min. 2/	Average Nominal	S.D. 3/	
33	15	67	42	9	500	1	28	43	30

Source: Industrial Developent Corporation

1/ Including the surcharge.

2/ Minimum duty excludes zero rate.

3/ Standard deviation, normalized in respect to the average rate.

Export promotion: Export commodities and their inputs are exempted from the value-added tax. Principal export promotion measures comprise subsidies under the General Export Incentive Scheme (GEIS), customs duty rebates and drawbacks, and income tax relief for large-scale export-oriented projects.

The major export incentive scheme in place is the GEIS. It was introduced in April 1990 with a view to helping firms offset the price disadvantage that South African exporters face in the international markets, including that arising from the anti-export bias inherent in the import protection system. The GEIS provides tax-free financial subsidies to exporters based on the value of exports, degree of processing, local content of the export products, and South Africa's export competitiveness as measured by the real effective exchange rate. 1/ However, to the extent

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1/ The GEIS formula is as follows: $Z = U * (M + E) * P$,
   where
   Z = Tax-free assistance provided to exporters;
   U =   Export sales value (f.o.b.);
   M = Degree of processing (zero for primary products, 7.5 percent for beneficiated primary products with its minimum value at 2.5 irrespective of the E-factor, 12.5 percent for material intensive products, and 25 percent for manufactured products);
   E = Index of real effective exchange rate; E is positive (negative) when the exchange rate shows a real appreciation (depreciation) in relation to the 1979 index;
   P = Local content factor (zero if local content is less than 0.35; one if the local content exceeds 0.75; otherwise equal to the actual local content. Local content is defined as proportion of non-imported inputs used in the production of U.)

that assistance under the GEIS does not correct for the import protection inherent in the tariff system, and, in fact, is biased in favor of local inputs, it intensifies the protection on inputs and deters better use of resources. Moreover, the scheme attempts to address inappropriate exchange rate policy through a subsidy that further distorts the overall trade structure.

Tariff Collection and Export Subsidies, 1992/93

Statutory Tariff rate	Tariff Collection as percent of 1/			Exports subsidies as percent of		
	Imports	Total revenue	GDP	Manufacturing exports	Total Expenditure	GDP
28	9	6	1.5	9	2.5	0.8

Sources: Appendix Tables
1/ After rebates and drawback but before payments under Customs Union agreement.

Rebate and drawback provisions also apply to customs duties imposed on imported materials used in the manufacturing, processing, or packaging of exported goods. Exporters cannot concurrently take advantage of the GEIS and the duty rebate/drawback scheme, and they have generally favored the use of the GEIS partly because it was seen as less cumbersome. Until very recently, the procedure involved in customs duty rebates and drawbacks was oriented toward protection rather than the facilitation of exports, as it required importers to justify the use of imported instead of domestic goods and to submit some proof that the local industry could not supply the inputs; this requirement was eliminated in 1991, but the change is not yet well known to exporters.

Other export incentives include export marketing allowances, export credit re-insurance, low-interest loans from the Industrial Development Corporation (IDC), and sector-specific incentives. In 1991, tax relief under the auspices of Section 37E of the Income Tax Act was introduced to encourage large-scale production and exports of beneficiated industries, including aluminum, stainless steel, and petrochemicals. The benefits under Section 37E were closed to new applicants in late 1993, but export flows from the projects that will receive the incentive will not be realized until 1995.

2.   **The development of trade policy** 1/

Since the 1920s, import substitution has been seen as an instrument of industrial development. The inward-looking strategy was rooted in the country's relative geographic isolation and justified on infant industry grounds. There was a shift toward greater emphasis on exports in the early 1970s, but the restrictive import regime was not relaxed; indeed it was reinforced in the mid-1980s following the application of widespread sanctions against South Africa (Table 11).

Import licensing was introduced in 1949, succeeding exchange restriction as the principal means of import control (Table 12). A system of tariff protection was set in place during the 1960s, but direct import controls remained the main protective mechanism through the mid-1980s. A positive list of freely permitted imports applied to a limited number of goods (21 percent of import value in 1962); the remaining imports were under annual allocations. Tight import control (under the "restricted" list) were imposed primarily on commodities of a type produced in South Africa or for which substitutes were considered available.

In addition to serving industrial policy, import controls were seen as safeguarding the external position. The controls were intensified in mid-1965 and again in 1971 to stem the drain of reserves. In 1972, under pressure from GATT trading partners and as the external position improved, South Africa began to phase out the use of quantitative controls. The process was interrupted in the early 1980s by a deterioration in the external payments situation, then renewed and accelerated in 1983 following the recommendation of the Interdepartmental Import Control Committee, with a view to eliminating the restrictions completely. By mid-1985, the easing of quantitative control had been advanced to the point of switching from a positive list of freely permitted imports to a negative list of imports requiring approval; the scope of direct controls had been reduced from 77 percent of import value in 1983 to 23 percent by that time. Widespread sanctions against South Africa in 1985 once again stalled the lifting of direct import restrictions as the country intensified its pursuit of self-sufficiency. Import liberalization was resumed in 1989 and by end-1992, the coverage of direct control was about 15 percent of all tariff lines, largely in agriculture and food products and textiles.

From the late 1960s until recently, tariffs were increased selectively to compensate for the removal of quantitative restrictions. In addition, import surcharges were resorted to intermittently. Most recently, an import surcharge was introduced in 1985, raised in 1988, then lowered in 1990-91. In 1964, effective tariff protection had averaged 15 percent on consumer goods, 6 percent on intermediate goods, and 2 percent on capital goods (Holden, 1992a). By 1989, the effective protection on manufactured products

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1/ A description of the development of South Africa's trade policy can be found in the 1993 GATT Reports by the Government and by the Secretariat.

Table 11. South Africa: Development of Trade Policy

Year	External constraints	General strategy	Import Restrictions			Export promotion	Impact on growth
			Licensing	Tariff	Surcharge		
1920		Inward looking					
							Growth promoted by import substitution
1950			Licensing introduced				
							Output growth spilled
1960							into some exports
	Reserves losses		Tightened	Tariff put in place			
			Switching between tightening & relaxing; some simpli- fication	Gradual increases especially to compensate for import			Growth constrained by size of
1970	Reserves losses	Dual: Both import substi- tution & export promotion	Tightened	control relaxation		Export incentives introduced	domestic market growth stimulated
	GATT pressure		Relaxed slightly		Introduced Lowered		by exports
1980	Reserves losses		Simplified	Rebates & drawbacks for exports	Abolished Reintroduced Lowered Abolished	Full range of incentives in place including customs duty rebates & drawbacks	
			Switch from positive to negative list				
Late 1985	Sanctions	Self- sufficiency intensified	Gradually eliminated		Reintroduced		Exports expanded greatly; Imports reduced slightly
					Increased		
1990	GATT pressure				Lowered	GEIS introduced Section 37E; Exports exempted from VAT	Increased exports induced by depressed domestic demand
Present	Sanctions lifted	Outward looking	To eliminate completely by 1/1/95	To rationalize, lower & simplify	To abolish	To rationalize	

Table 12. South Africa: Chronology of Import Licensing

(Percent of imports subject to 1/)

	(A) No QRs "Free" list 2/	(B) Licensing/ Automatic 3/	(C) Global Quotas 4/	(D) Individual Quotas 5/	(E) Specific License (Restricted List) 6/	(F) Motor Vehicles (Special Arrange- ment)
Through 1948	Imports were controlled through exchange restrictions.					
1949	Import licensing introduced. Licenses required for most non-prohibited imports. Imports of luxury, semi-luxury and consumer goods produced locally in adequate supply were prohibited.					
1950-56	Relaxation: some items put on "free" list and some "restrictive" items under global quotas.					
1961	Tightening: Free list reduced; granting of licenses restricted.					
1962	21	N.A.	58	---------- 12 ---------		9
1963	Relaxation: some items moved from List (E) to (D).					
1965	Tightening: quota allocations lowered.					
1966	Relaxation: some items moved from List (D) to (A), including man-made fibers and office machinery, and some items from List (E) to (D).					
1969	Simplification of import regime with only three basic categories: (A), (B) and (C) combined, and (D).					
1971	Tightening: GATT Article XII invoked; quota allocations lowered; List (A) substantially curtailed; List (C) essentially taken over by List (D); and automatic licensing suspended.					
	9	N.A.	---------- 83 -----------		8	N.A.
1972	Relaxation: GATT Article XII disinvoked; some restrictions imposed in 1971 reversed.					
	20	54	18	8	N.A.	N.A.
1974	16	70	7	7	N.A.	N.A.
1975	25	56	6	13	N.A.	N.A.
1976	25	60	6	9	N.A.	N.A.
1977	27	60	5	8	N.A.	N.A.
1978	32	57	5	6	N.A.	N.A.
1979	25	66	5	6	N.A.	N.A.
1980	New, more liberal import control procedure introduced, with a number of items under List (B) moved to (A) and most of items under List (C) moved to (B).					
1984	Import control procedure defined only two categories of goods: those requiring licenses and those that did not. Controls eliminated on a large number of goods, including pharmaceutical products, hand tools, toys, carpets.					
1985 (July)	Shift from a positive list not requiring licenses to a negative list system (23 percent of import value or 28 percent of tariff lines).					
1989-92	Gradual removal of licensing requirements; at end-1992, about 15 percent of the tariff lines required licensing.					

Sources: Staff Reports, and IMF, Annual Report on Exchange Arrangements and Exchange Restrictions, various issues.
 1/ The percentages are not targets; rather, they are the proportions in the preceding years for the specified goods covered in the given categories. Changes in the percentages therefore do not necessarily reflect policy changes.
 2/ Including goods originating in neighboring countries with which there exist trade agreements.
 3/ Permits granted automatically to bona fide merchants and manufacturers.
 4/ Global import allocations are set annually. No specific quotas are granted to individual importers, although it appears that for several categories of goods, licensing would be granted based on importers' previous records. Until 1972, this category included capital and transport equipment (excluding automobiles) and spare parts.
 5/ Annual quotas are granted to individual importers. Traditionally, this category includes some consumer goods not available locally, "general merchandise" available locally, and rice.
 6/ Traditionally, this list includes consumer goods available locally or for which substitutes are available, wheat, and fertilizers.

estimated by the Industrial Development Corporation (IDC, 1990) was 30 percent, corresponding to an average nominal rate of protection of 28 percent (60 percent on consumer goods, 17 percent on intermediate goods and 19 percent on capital goods); import licensing added another 10 percent to the effective rate of protection. 1/ Since then, effective protection overall has been lowered slightly, consistent with the reduced surcharge and the further removal of direct controls. 2/

Beginning in the early 1970s, in line with the recommendations of the Reynders Commission, 3/ export incentives were introduced to compensate for the anti-export bias implicit in the import restrictions. By 1980, a full range of incentives was in place, including direct cash grants, tax concessions on export turnover and on profits from exports, rebates and drawbacks of customs duties on imported inputs, and rail freight concessions. The selective increases in tariff rates in parallel with these incentives were consistent with the dual approach of simultaneously maintaining protection and promoting exports, which was reiterated by the 1985 White Paper on the Industrial Development Strategy. In practice, the customs duty rebates and drawbacks for exporting activities have been discretionary, impermanent, cumbersome, and hence little used. As a consequence, the incentive structure has remained biased toward producing for the domestic market. 4/ Manufacturing export growth was nonetheless achieved, most notably in highly subsidized base metals. Since the introduction of the GEIS in 1990, most qualified exporters have taken advantage of the scheme, offsetting some of this bias. 5/

Estimates show that import substitution was an important source of growth up to the mid-1950s, during which time imports of consumer and intermediate goods were gradually replaced by domestic production (Holden,

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1/ An estimate is not available on the effective protection of import licensing in 1964; therefore, it is not possible to compare the overall rate of effective protection between the two periods.

2/ The above figures refer to the statutory tariffs. Actual tariff collections were about one third of statutory rates, with the difference stemming largely from bilateral trade agreements, rebates and duty drawbacks, and exemptions for specific firms.

3/ The Reynders Commission's report on export trade from South Africa was published in 1972.

4/ Through an examination of the relationship between aggregate prices of exports, imports and nontraded goods, (Holden, 1992b) econometrically estimated the incidence of overall trade policy in a general equilibrium framework over the period 1974-86. She concluded that, notwithstanding export incentives given to manufactures, the structure of protection imposed an implicit tax of 34 percent on exports excluding gold; including gold (to which no export incentives were granted), the implicit tax was higher.

5/ The tax-free subsidy under the GEIS represented about 8.4 percent of the total value of manufactured exports in 1989-91, equivalent to a taxable value to exporters of about 17 percent on average.

1990 and 1992a). Effective rates of protection varied widely for different industries, and, by the late 1960s, the process of import substitution was mostly complete for highly protected intermediate and consumer goods industries. Import substitution during the 1970s extended to intermediate goods where effective protection rates were lower, but its output effects were limited by the smallness of the domestic market. Over the period 1965-85, the degree of import penetration for intermediate goods declined sharply in the production of textiles, wood, paper, metals and their products, and chemicals (Kahn, 1987), and the overall import penetration has been reduced significantly. 1/ The proportion of imports of machinery and transport equipment, at about 40 percent of total imports, has, however, increased since 1980. Price elasticities for machinery and transport equipment are estimated to be low, because, for many products, efficient production requires highly developed technology with significant economies of scale (Kahn, 1987). It is evident that a growing external market would be key to the extent to which future growth could benefit from the expansion in the production of capital goods as well.

The expansion of exports and manufacturing production has far outpaced overall economic growth during the last thirty years. 2/ Whereas the growth in the primary sector was sluggish, manufacturing exports have helped sustain output and income. It has been suggested that a developed manufacturing sector--evolved from import-substituting activities until 1970--was a prerequisite for export growth, and that during this period export markets tended to emerge when the domestic economy was in recession. Once import substitution had been largely achieved in consumer goods, export growth and the process of industrial development have accompanied and reinforced each other; exporters have also been able to develop and maintain foreign markets independently of developments in domestic markets (Holden, 1990). While that may have been largely the case, it would appear that the recent expansion in manufacturing exports has continued to originate in part from a switch to exports at a time of surplus domestic capacity. The current recession was accompanied by a sharp expansion in the exports of manufactured and semimanufactured products, especially machinery and transport equipment, and electrical tools. At the same time, it is recognized that the long-run cost structure of several industries is not competitive internationally, that even their exports at excess capacity depend crucially on special assistance, and that additional support might be required once the recession is over unless a fundamental reform shifts the cost-price structure facing these industries.

1/ Defined as the ratio of imports of goods and nonfactor services at constant prices (national income account concept) to total domestic demand. The overall import penetration ratio fluctuated between 25 percent and 30 percent from 1950 to 1980, then declined gradually to 21 percent in 1992.

2/ Between 1960 and 1990, both merchandise export volume and manufactured output more than quadrupled whereas real GDP less than tripled.

3.   Selected international comparative indicators

Notwithstanding its highly protective system, South Africa's degree of openness measured by its share of trade in GDP (1991) is comparable to those of other upper-middle income developing countries and sub-Saharan countries (Table 13). In particular, its export share is higher than those of both comparator groups notwithstanding the trade sanctions, and its import dependence, as measured by the import share in GDP, is only slightly lower than that of other upper-middle income countries.

The share of trade (exports plus imports) in nominal GDP has been on a declining trend since 1950, attributable in large part to price developments. It fell sharply with the terms of trade during the 1950s and stood at 38 percent in 1960. Its peak at 57 percent in 1980 corresponded to the height of both the gold export and petroleum import prices. The share declined gradually since and was at about 37 percent in 1992. There was a significant reduction in South Africa's import dependence between 1980 and 1985, but since then, in spite of South Africa's efforts to generate current account surpluses each year in response to international sanctions, the fall in its import share was relatively small. In volume terms, the maintenance of the share of exports in the domestic activity since 1987 was the main factor that helped achieve current account surpluses despite a steady fall in the country's terms of trade. Overall, South Africa's export and import volume growth in recent years has been comparable to that of other African countries, but has lagged behind that of other developing countries.

South Africa's average level of protection (nominal statutory rate at just under 30 percent) is not high in comparison with other developing countries at the outset of embarking upon tariff reforms under economic programs supported by the Fund. But these countries, including African countries at much lower income levels, such as Ghana and Tanzania, have reduced their protection considerably with a view to achieving eventually an average tariff of 8-15 percent. The effective protection (30 percent for manufactures, or 40 percent including import controls), however, appears to be on the high side. More important, as discussed above, the overall system is much more complicated and arbitrary than that of most other countries.

4.   Future policies

In the context of a post-apartheid economic system, there appears to be broad support for liberalizing the import regime and reorienting trade policy toward export promotion. This will require the maintenance of a competitive cost structure. The Government envisages a complete rationalization of the tariff structure, aimed at a much simpler system, with greater stability and transparency, more uniform tariff levels, more effective administration, and a reduction of the present anti-export bias. However, concerns have been raised about the potential effects of lower tariffs on the balance of payments, employment, and fiscal revenue. Thus,

Table 13.   South Africa: Trade Indicators

(In percent)

1.   Degree of Openness:

| | Ratio to GDP (Current Prices) | | | | Ratio to GDP at constant 1985 prices | | | Terms of |
	Exports f.o.b.	Imports f.o.b.	Total Trade	Current Account	Exports	Imports	Total Trade	Trade (1985 = 100)
IFS/SARB Data Base: 1/								
				South Africa				
1950	31.1	22.9	54.0	...	15.1	29.4	44.5	191
1955	27.7	23.9	51.6	-3.4	20.4	30.8	51.2	154
1960	26.5	21.0	37.5	0.4	21.7	28.1	49.8	144
1965	24.0	22.9	46.9	-3.9	18.3	30.3	48.6	178
1970	19.2	20.4	39.6	-7.0	20.9	32.5	53.4	160
1975	24.7	20.8	45.5	-6.7	22.7	33.0	52.7	138
1980	33.1	23.5	56.6	4.5	30.0	27.3	57.3	108
1985	28.6	18.9	47.5	4.2	28.6	18.9	47.5	100
1986	28.6	18.2	46.8	4.5	27.5	18.4	45.9	102
1987	26.4	17.4	43.8	4.1	26.4	18.7	45.1	107
1988	26.2	19.9	46.1	1.7	27.9	21.8	49.7	105
1989	24.6	19.0	43.6	1.5	28.5	21.3	49.8	101
1990	23.1	16.4	39.5	2.0	29.2	20.1	49.3	99
1991	21.6	15.9	37.5	2.1	29.4	20.7	50.1	97
1992	20.6	15.9	36.5	1.2	30.3	22.2	52.5	96
WDR: 2/		1991						
South Africa	23.6	16.1	39.7					
Upper-middle income	17.7	17.5	35.2					
Sub-Saharan Africa	23.2	21.4	44.6					

2.   Average annual growth rate in trade volumes: 3/

	1975-84	1985-89	1990-92
Exports			
South Africa	4.1	3.5	1.1
Africa	-0.4	3.6	3.2
Developing countries	0.7	8.0	7.4
Imports			
South Africa	0.4	1.7	0.6
Africa	1.6	-0.9	1.0
Developing countries			

Sources: South African Reserve Bank (SARB), Quarterly Bulletin, September 1993; IMF, International Financial Statistics, various issues; World Bank, World Development Report, 1993; IMF, World Economic Outlook, May 1993.

1/   There are some discrepancies between data as reported in the IMF International Financial Statistics and in SARB Quarterly Bulletin; data from 1985 onwards correspond to those reported in the Reserve Bank bulletin.

2/   For comparability, data shown here are from the same data source, namely, WDR, 1993.   Data on South Africa were adjusted to exclude other members of the Southern Africa Customs Union.   Other "upper-middle income" comparator countries include those for which data are reported.

3/   Comparator data are from the IMF World Economic Outlook, May 1993; data for South Africa are from IFS and SARB Quarterly Bulletin.

there remain the thorny questions of the speed of adjustment in specific industries and the details of transitional protection.

The basic design for a more outward-looking strategy was first formulated by the Industrial Development Corporation (IDC) in 1990 following a comprehensive review of the current trade system. The IDC recommended a package of measures over the medium term, to be implemented within a coherent macroeconomic framework--including prudent fiscal policies and a realistic and stable real exchange rate. The main elements of the IDC's reform proposals were: (i) to pre-announce a schedule of tariff reduction and rationalization, toward a more uniform, stable and transparent tariff structure; this would include the replacement of formula duties by an effective anti-dumping measure; (ii) to eliminate import surcharges; and (iii) to improve the system of customs duty rebates for exports--allowing imported inputs to be made available to exporters at world prices, while at the same time phasing out the GEIS. This approach is consistent with South Africa's desire to implement the current Uruguay Round Tariff agreements and eventually to accept all the provisions of the GATT.

The Government has proceeded cautiously. Import surcharges are intended to be eliminated by mid-1994, provided the balance of payments situation is under control. South Africa has acceded to the GATT provision on licensing of industrial products and intends to eliminate all quantitative import controls by end-1994 (with the usual exceptions on non-economic grounds). Similarly, in line with the expected agreement on agricultural products, it plans to adopt a tariff-based system for all such products by the same date, and these tariffs would be reduced gradually by an accumulated 36 percent in the following five years, from the 1988 base rates (or equivalents) to an (unweighted) average rate of about 40 percent.

Under the offer to GATT partners in early September 1993, practically all industrial products would be bound within the current Round's five-year timetable, with a tariff structure representing a one-third cut in average maximum duties compared with the 1989 base rates. From a very complex system, the offer shows a substantial reduction in the number of tariff lines and only six basic bound rates of duty (ranging from zero to 30 percent). It is estimated that the average tariff rate on industrial products would be 15 percent when the reform is completed. In general, tariff rates would escalate with the level of processing, with lower rates applied to primary products and inputs for manufactures (including machinery not produced locally) and higher rates applied to manufactured and consumer products. The simplified structure would make discretionary and frequent amendments to the tariffs impractical, thereby rendering the system more stable and transparent. Also, under the new tariff system, formula duties would be abolished and unfair trade practices would be countered by anti-dumping actions or countervailing duties compatible with GATT provisions. South Africa's current anti-dumping legislation (amended 1992) continues to permit actions against genuine low-cost imports, and would need further amendments in line with the GATT requirements prior to the coming into effect of the Uruguay Round. Table 14 compares South Africa's intended

Table 14.   South Africa: Tariff Reform Plan
Comparison with Selected Countries

	South Africa		Six Comparator Cases 1/ (Range)
Year initiated:	1993	2/	1978-90
Duration (years)	6	3/	3.5-16
Pre-announcement of tariff structure			
Yes	Yes		4 cases
No			2 cases
No. of tariff rates:			
Pre-reform	35	4/	18-43
Post-reform	6	3/	4-9
Other charges (number):			
Pre-reform	1		1-11
Post-reform	0		0-1
Other charges (percent):			
Pre-reform	5-40		6-500
Post-reform	n.a.		...
Maximum tariff (percent):			
Pre-reform	500		50-400
Post-reform	30	3/	25-35
Minimum tariff raised in course of reform:			
Yes	Yes		2 cases
No			4 cases
Average tariff (percent):			
Pre-reform	28	5/	32-120
Post-reform	15	6/	8-30
QRs reduced:			
Before	Yes		3 cases
Simultaneously	Yes		3 cases
Cascading structure (post-reform):			
Yes	Yes		6 cases
Structure of tariffs (post-reform):			
Raw materials	0-5		3.3-55
Intermediate	10-15		5-70
Final goods	10-30		9-74
Duty drawback (post-reform):			
Yes	Yes		6 cases

Sources: For South Africa, data provided by the authorities. Some figures refer to the bound tariff rates offered--actual tariffs are likely to be below the bound rates. For comparator countries, data are from Subramanian et. al., (1993), page 21; tariff reform is still ongoing in some cases.

1/ Comprising Bangladesh, Brazil, Colombia, Egypt, Ghana, and Korea.
2/ Preparations for the reform were launched in 1990 in response to the IDC report of that year and further articulated at the GATT's Trade Policy Review in June 1993. Reduction of quantitative controls was initiated as early as 1988. To the extent that changes continue to be made, some of the information above may not be up-to-date.
3/ Excepting restructuring industries for which the reform period could span eight years, during which the maximum tariffs could be as high as 60 percent and the number of tariff rates could exceed the number reported above.
4/ Including ad valorem equivalents of formula duties, the number of rates is about 200.
5/ Refers to import weighted average of statutory tariffs, including surcharges, in 1993; based on collection, import duty rate was only 9 percent.
6/ On the basis of import weighted average of statutory tariffs on industrial products.

tariff reform with selected countries that have undertaken such reforms in recent years.

The implementation of industrial tariff reduction under the terms of the Round would be gradual and completed only at end-1998. Moreover, a large number of products (notably textiles and clothing, steel, automotive vehicles, and electronics) have been classified as industries subject to restructuring; it is expected that under the "economy in transition" status, the adjustment period allowed for these industries could be as long as eight years. 1/ At the same time, it is recognized that South Africa needs to begin without delay its pursuit of an export-oriented growth strategy. The fast expansion in manufacturing exports in the latter half of the 1980s is not likely to be sustained under the existing policies and price structure once the domestic market recovers. It is acknowledged that the GEIS is not only expensive but also that it further distorts the allocation of inputs and that its effectiveness in developing exports does not eliminate the fundamental anti-export bias stemming from high input costs; therefore, it is intended that the scheme be phased out and abolished by end-1997. Incentives for exporters would be replaced by an improved duty drawback and rebate scheme that would seek to approximate a free trade regime for exporting activities. Toward this end, in addition to making the system independent of the availability of local inputs, the current duty drawback scheme for exports is being extended to indirect exporters as well as being streamlined so that it becomes automatic. Alternatives such as free trade zones or bonded manufacturing warehouses are also under consideration. However, they would appear unsuited for South Africa, where exporting activities are already well integrated into production for domestic use and where domestic investment plays a more important role than foreign investment.

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1/ Furthermore, the initial bound tariff rates for these products would be higher than the basic rates mentioned above (45 percent for textiles, 60 percent for clothing, and 50 percent for automobiles.)

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Exchange Arrangements

A full description of South Africa's exchange arrangements as of December 31, 1992 is given in Exchange Arrangements and Exchange Restrictions, Annual Report 1993. At present, South Africa maintains one exchange restriction subject to approval under the Fund's Article VIII, namely, the multiple exchange practice arising from the dual exchange market. At end-September 1993, South Africa concluded the 1994 Debt Arrangements with creditor banks, effectively eliminating its external arrears on capital repayments that had been outstanding since late 1985.

The other change in the exchange system since end-1992 was:

Payments for Invisibles:

September 1, 1993: The indicative annual limits on allowances that authorized dealers may provide for travelling to countries other than neighboring countries were raised as follows: (i) the basic tourist allowance, from R 19,000 to R 20,000 for an adult and from R 9,500 to R 10,000 for a child; (ii) the limit on additional allowances for business travel was raised from R 28,000 to R 30,000.

VII. Regional Issues

The sheer size of the South African economy renders it an undeniably important regional force. Although its population represents only 8 percent of sub-Saharan Africa, *its gross domestic product accounts for more than one third of the sub-continent's total production (Table 15).*

Up to now, there have been political barriers to South Africa's integration into the region; but these are rapidly being dismantled. Progress in South Africa toward a new constitutional dispensation has elicited a lifting of trade and financial sanctions by most major trading countries. Corresponding to this improved access to international markets, there has been a reevaluation of the economic strategy within South Africa: the new Government is likely to continue the shift from inward-looking policies (bent on self-sufficiency and reduced vulnerability to sanctions) to export-oriented policies determined to use trade as an engine of growth. Moreover, with the increased attention being given to trade blocs in Europe, America, and Asia, it is almost inevitable that the countries in southern Africa will seek to strengthen their own initiatives for collaboration.

There are, of course, already a number of regional structures in place: the Southern African Customs Union (SACU) and the Common Monetary Area (CMA) in which South Africa plays a major role; and the Southern African Development Community (SADC) and the Preferential Trade Area for Eastern and Southern Africa (PTA) from which South Africa has been excluded. Because of South Africa's relative economic weight, its neighbors in the region will want some early indications from the new Government about the role it envisages for itself and its commitment to economic integration. The purpose of this chapter is to provide some background to these questions. It begins by summarizing the various economic linkages--trade, investment, movements of labor and infrastructural interdependence--between South Africa and its neighbors at present. It then goes on to describe briefly the regional institutions already in existence, the evolving views on their role, and initiatives for further integration.

1. Economic linkages [1]

There are numerous historical economic links between South Africa and its neighboring countries that proved too fundamental to be broken by sanctions. South Africa's immediate neighbors depend heavily on trade with and labor markets in South Africa.

Trade: South Africa has a large trade surplus with the rest of Africa, estimated at nearly US$4 billion or 40 percent of its total trade surplus in 1990. Three quarters of this surplus reflected trade within SACU. [2] In

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[1] This section updates and expands on the materials reported in South Africa - Recent Economic Developments, SM/90/176, 8/28/90.

[2] See section 2 for a more extensive discussion of SACU.

Table 15. South Africa: Regional Linkages

| | Members of SACU | | | | Other SADC members (except Angola) | | | | | Sub-Saharan |
	Botswana	Lesotho	Namibia	Swaziland	Malawi	Mozambique	Tanzania	Zambia	Zimbabwe	Africa
Region's dependency on South Africa										
Population (1991, in millions)	1.3	1.8	1.5	0.8	8.8	16.1	25.2	8.3	10.1	488.9
GDP (1991, in US$ million)	3,664	578	1,961	931	1,986	1,219	2,223	3,831	5,543	255,806
(As a percentage of South Africa's)	4.0	0.6	2.2	1.0	2.2	1.3	2.4	4.2	6.1	280.3
GNP per capita (1991, in US$)	2,530	580	1,460	1,140	230	80	100	415	650	350
(As a percentage of South Africa's)	99	23	57	45	9	3	4	16	25	14
Imports from South Africa (1990, in percent)	77	91	92	94	37 1/	28 2/	--	18	27	27
Exports to South Africa (1990, in percent)	5	60	25	53	10 1/	15 2/	--	--	10	6
Exchange system	Pula pegged to basket heavily weighted by rand	Loti pegged to rand	Namibian dollar pegged to rand	Lilangeni pegged to rand	Kwancha pegged to trade-weighted basket	Metical floated	Tanzania shilling pegged to trade-weighted basket	Zambian kwacha floated	Zimbabwe dollar floated	
Number of workers in South Africa (1991-92)	13,400	117,000	45,000	25,000	3/	3/	3/	3/	3/	325,000
(In percent of wage earners)	6	15	23	27						(...)
Total remitted income (US$ million)	37	445	...	110	3/	56	3/	3/	3/	
(As percent of exports)	2	600	19	34						
(As percent of GNP)	1	27	11	5						
Comparison of macroeconomic performance 4/										
Real growth rate (annual average): 1981/89	10.7	3.7	1.0	5.5	2.2	-1.4	2.6	0.8	2.7	2.1
1990/92	4.7	1.0	2.6	3.3	1.6	0.5	3.7	-1.4	-0.4	...
Inflation rate (annual average): 1981-89	10.5	14.0	13.0	13.8	16.6	66.5	30.0	39.5	13.5	19.0
1990-92	13.3	15.5	14.0	11.8	15.2	42.3	21.4	131.4	26.5	...

Sources: Data provided by the South African authorities; Central Statistical Office, Gaborone, Statistical Bulletin, 1992; World Bank (1993); Hill (1992); staff reports and reports on recent economic developments for the various countries referred to.

1/ 1989.
2/ 1992.
3/ Data on migrant workers as of 1986 and on remittance income in 1984 were reported in the Recent Economic Development on South Africa, SM/90/176, 8/28/90.
4/ Data are not complete for all years for some countries.

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that year, South Africa traded with 49 countries in Africa outside the customs union. Members of SACU relied heavily on trade with South Africa, with an (unweighted) average of about 35 percent of their exports destined for South Africa and nearly 90 percent of their imports originating from it or coming through it. South Africa's exports to all African countries accounted for just under 20 percent of its total exports, of which close to three-fourths were to other SACU partners; imports from Africa accounted for about 6 percent of its total imports, two-thirds of which came from SACU partners. 1/

Financial flows: Trade flows also play an initiating role in financial flows; these flows may take the form of trade finance, general lending or direct investment. 2/ South Africa's holdings in other African countries amounted to about R 4.1 billion at the end of 1991; almost half of this amount was in the form of private direct investment, the remainder in short-term trade credits, central bank financing and development assistance. There are subsidiaries of large South African companies in mining and manufacturing in other countries in southern Africa, largely in other SACU members, Zambia and Zimbabwe. Within the last year and following South African firms being allowed to tender for some bilateral and multilateral development assistance projects, there has been increased investment activity in banking, construction and other services. Direct investment by other African countries in South Africa is small, and their overall investment at end-1991--mostly in the form of Reserve Bank securities-- accounted for only 3 percent of South Africa's total foreign liabilities.

Employment and workers' remittances: South Africa's mining sector relies heavily on guest workers from its neighboring countries; these accounted for about 30-35 percent of the total employment in the sector in 1990. Of approximately 175,000 contract workers from the rest of Africa, the majority come from Lesotho, Mozambique, Swaziland and Botswana. In addition, there are 150,000 African immigrants taking up permanent residence

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1/ Figures for trade with SACU members have been estimated. Therefore, they are not identical with the IMF Direction of Trade Statistics (for which trade with SACU members was extrapolated from 1985 figures.) Data on South Africa's trade with the region tend to be underestimated to the extent that such trade may have been carried out illegally or informally--through the widespread practice of re-routing--during the period for which international trade sanctions against South Africa were in effect.

2/ Movements of finance vis-a vis other members of the Common Monetary Area (CMA)--Lesotho, Namibia and Swaziland--are governed by the Multilateral Monetary Agreement; see section 2 for further discussion. It is difficult to identify accurately investment in and out of these countries. The figures cited below refer to outstanding stocks of foreign assets and liabilities reported in South African Reserve Bank (SARB) Quarterly Bulletin; they almost certainly understate South Africa's holdings in other African countries as equities are valued at nominal prices and the accounting of indirect holdings is probably incomplete.

in South Africa, including large numbers from Malawi, Zambia and Zimbabwe. The South African labor market thus provides employment and income to a significant portion of its neighbors' work force. Lesotho, Malawi and Swaziland in particular are highly dependent on workers' remittances from South Africa.

Infrastructure: South Africa supplies a significant portion of the electric power requirements of Lesotho, Mozambique, Namibia and Swaziland. South African rail services and sea/air ports handle a high volume of imports and exports of neighboring southern African countries, and South African Airways and its pool partners service passengers and air freight throughout the region.

2. Formal institutional linkages

Of the numerous regional associations in existence, South Africa is at the center of the CMA and the SACU. In addition to the SACU agreement, South Africa has bilateral trade arrangements with Malawi (1990), Mauritius (1992), Mozambique (1984) and Zimbabwe (1964), providing for tariff preferences for all or selected products. Other agreements with African countries relate to mine labor, transport and infrastructure, social services and training.

South Africa is not a member of the Southern African Development Community (SADC) nor the Preferential Trade Area for Eastern and Southern Africa (PTA). Prospects of changes in South Africa have motivated the other countries in the region to reconsider their future economic relations with that country. On the one hand, there is some apprehension about the possible dominance of New South Africa in any future regional economic arrangement; on the other hand, South Africa's economic size is recognized as a potential market and source of growth for the entire region. However, given the weak performance of South Africa in recent years and its pre-occupation with own domestic problems, it is difficult to assess at this point the probable gains from South Africa joining any of these alliances.

The Common Monetary Area (CMA):

The CMA is a single exchange control area consisting of South Africa, Lesotho, Namibia and Swaziland. The currencies of other members are pegged to the South African rand at par. Within the CMA, the South African rand is legal tender in Lesotho and Namibia, but not in Swaziland. Bank notes issued by the other CMA members are freely convertible into the rand, but they are not legal tender in South Africa. Movements of funds within the CMA are unrestricted and unrecorded except for statistical and customs purposes, and residents have access to the each other's money and capital markets. Exchange controls applicable in their relations with countries outside the CMA are largely similar. Lesotho and Namibia participate in the dual exchange system of the financial rand; and, with the approval of South African Reserve Bank, investment in Swaziland can be made through the financial rand market.

The arrangement had its origin in the tightly formed Rand Monetary Area (RMA), established in 1974. 1/ Under the RMA, South Africa managed the common pool of gold and foreign exchange reserves, while other countries were compensated for their loss of seignorage. 2/ The RMA was replaced by the Common Monetary Area (CMA) in 1986, in which Lesotho and Swaziland issued their own currencies, and each country in the CMA became partially responsible for its own monetary policy and control. Since 1990 when Namibia became independent and joined as a member state, the agreement governing the CMA has been referred to as the Multilateral Monetary Agreement (MMA); Namibia introduced its own currency in September 1993.

Questions have been raised as to: (a) whether conditions for a successful currency union exist in the area, and (b) whether they are likely to be maintained with the impending transformation in South Africa. The theoretical literature focusses on labor mobility as the primary determinant of an optimal currency area. *Free labor movement within the CMA is not now* possible, nor is it envisaged in the near future. Yet there are many other factors that argue in favor of a currency union.

As shown above, the smaller members depend heavily on trade with South Africa and access (albeit limited) to its labor market. This situation is unlikely to change significantly in the foreseeable future; thus these countries are likely to continue to benefit from the fixed, predictable exchange rate and the unrestricted flow of funds. Although the smaller countries forego their ability to pursue an independent monetary policy, the strict anti-inflation mandate of the South African Reserve Bank has imposed financial discipline on them, and they have generally performed better in recent years than their SADC neighbors in terms of real growth and inflation. 3/

1/ RMA membership comprised Lesotho, South Africa and Swaziland. Although Botswana was never a member of the RMA, the rand was freely usable in that country until 1976, when it began issuing its own currency; the currency is presently pegged to a composite basket, which is heavily weighted by the South African rand.

2/ An annual compensation was defined as two-thirds of the rand currency in circulation in each country times the interest rate on South African long-term government securities. Because the rand is still legal tender in Lesotho and Namibia, they continue to receive compensations from South Africa.

3/ The critical question of whether CMA members would be better able to adjust to asymmetric shocks under a less constrained exchange rate regime is open to debate. Certainly the CMA should serve to dampen purely monetary shocks in the smaller members and to buffer short-lived and uncorrelated real supply-side shocks (e.g. crop failures). It is not clear, however, that a regime that allows greater inter-country variation in real interest rates would not facilitate smoother adjustment to the conventional demand-side shocks that stem from shifts in investment.

From the perspective of South Africa, monetary policy has not been unduly constrained by the concerns of its CMA partners. However, it is likely (especially in light of the magnitude of the unemployment problem) that concerns about labor and capital movements will emerge as South Africa tries to address its domestic problem of income disparities. The repercussions on cross-border factor flows of changes in the welfare system, the wage structure, and the regulation of employment will need to be assessed. This is a broader issue of which the CMA arrangement is only one of many facets.

The Southern African Customs Union (SACU):

In addition to South Africa, the SACU comprises Botswana, Lesotho, Namibia (since 1990) and Swaziland (BLNS). There are no restrictions on movements of goods among the five countries, and they share a common external tariff arrangement, as well as excise duty rates. Receipts from SACU members' customs and excise duties are pooled, then distributed in accordance with an agreed formula. SACU payments have been a major source of revenue for the smaller SACU partners, and the revenue-sharing formula has been a contentious issue since the early 1980s. 1/

The SACU arrangement differs from a typical customs union in that the common external tariffs are determined by South Africa instead of being jointly negotiated among the SACU members. Similarly, South Africa sets rebates, refunds and drawbacks, although the granting of these is at the discretion of individual SACU members. 2/ Reflecting this unusual arrangement, the current revenue-sharing formula (Annex), adopted in 1975, has the following features: (i) it treats the South African share of the common revenue pool as a residual; (ii) it includes excise as well as customs duties; (iii) it permits the BLNS to include intra-SACU imports (including imports from South Africa) in their calculations of the base to which the average duty rate applies, this being an attempt to compensate for trade diversion resulting from the arrangement; (iv) it increases the BLNS pro-rata share by a factor of 0.42, this being an attempt to compensate for the loss of fiscal discretion implicit in their membership of a customs union that is dominated by the largest contracting party, for the inflationary impact of the tariff structure and quota regime determined unilaterally by South Africa, and for any polarization of development within the region; and (v) it constrains the revenue to within the range 17-23 percent of the revenue base inclusive of duties.

1/ The Customs Union Commission recommended several revisions in 1981, potentially increasing the BLS share, but the recommendations were not accepted by South Africa. Changes to the arrangement were proposed again in 1986/87, but no agreement could be reached.

2/ The BLNS are also allowed to impose a tariff on imported goods from member countries in order to protect their own infant industries, for a maximum of eight years. This provision has not been used much in practice.

SACU Receipts in Relations to Imports and Total Government Revenue

Payment Year	Total SACU	Botswana	Lesotho	Namibia	Swaziland	BLNS	S. Africa 1/
In percent of estimated imports and excisable goods 2/:							
1987/88	9	22	19	...	19	20	8
1992/93	9	26	23	18	20	22	7
In percent of total government revenue:							
1987/88	n.a.	13	44	...	40	n.a.	7
1992/93	n.a.	24	47	26	40	n.a.	6

Sources: Data provided by the authorities.
1/ Including shares of the TBVC homelands in the numerator.
2/ Inclusive of duties.

Distribution of the SACU Revenue Pool
(In billions of rand and percent)

Payment Year	SACU Revenue Rb.	Botswana Rb.	%	Lesotho Rb.	%	Namibia Rb.	%	Swaziland Rb.	%	BLNS Rb.	%	South Africa 1/ Rb	%
1987/88	3.64	0.28	8	0.16	4	...		0.13	4	0.58	16	3.06	84
1992/93	7.92	1.34	17	0.55	7	0.75	9	0.36	5	3.00	38	4.92	62

Sources: Data provided by the authorities
1/ Including shares of the TBVC homelands.

A recent study by the World Bank makes a few observations on the trend in the collection of SACU revenue, its size and sources: (i) since the agreement in 1969, 1/ SACU's total revenue has stagnated in real terms and declined relative to GDP; (ii) the average revenue rate has gradually declined, from about 14 percent in the early 1970s to 9 percent at present; (iii) whereas excise duties were the main revenue source until the mid-

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1/ The original arrangement between the newly established Union of South Africa and the separate protectorates of Bechuanaland (Botswana), Basutoland (Lesotho) and Swaziland dated back to 1910. However, the agreement in its present form, which reflects partner country import shares, was negotiated in 1969.

1980s, contributing close to two-thirds of the total SACU receipts, customs duties have grown in importance and now contribute about three-fifths of the total; correspondingly, the effective customs duty rate has increased from 6 percent to 10 percent whereas the excise tax rate has fallen by half to the current level of 10 percent. Such a trend is attributable to South Africa's tax and trade policies, which have been motivated by domestic considerations. 1/ Indeed, the fuel levy, now a significant revenue source for South Africa, has been formulated in such a way as to ensure that the receipts are not shared with SACU partners.

The decline in SACU's revenue rate means that since the early 1980s, when the average rate reached the threshold of 10 percent, BLNS should have been receiving the minimum rate guaranteed by the formula, i.e., 17 percent of the value of imports and excisable goods inclusive of duties. In these circumstances, SACU's total revenue pool is irrelevant for calculating the BLNS revenue. As shown above, however, the actual payments to BLNS imply revenue rates well over the minimum. Apart from adjustments between initial and final estimates on payments, the discrepancy has been attributed to the BLNS's ability to bargain with South Africa over their estimates on the revenue base. A justification for the bargaining is the fact that payments are made with a two-year lag, resulting in an erosion in the purchasing power of accrued revenue. It is more than likely that the perceived political advantages from South Africa's role in the SACU have played a major part in its willingness to date to pay more than the minimum.

The Future of SACU: Political and economic developments in South Africa are already affecting its trade and tariff policies, with implications for the SACU revenue base. On the one hand, revenue from customs duties might be expected to increase once a more liberal import regime is in place and quantitative controls are replaced by tariffs; on the other hand, depending on import elasticities, a reduction in the average duty rate could lower the tariff collection. It is too early at this stage to assess how such changes would influence the SACU agreement. BLNS have often argued that the minimum revenue rate should be 20 percent rather than 17 percent, because the experience of other developing countries indicates that they could collect that amount. 2/ Furthermore, it may be argued that the costs of both South Africa's trade policies and the loss of fiscal

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1/ World Bank (1993a).

2/ However, among developing countries with relatively high imports/GNP ratios comparable to those of the BLNS countries, collection is generally no larger than 10 percent of the value of imports (including duties); higher collections are associated with smuggling and lower imports/GNP ratios. Based on the World Bank study, once the administrative costs of collection are taken into account, BLNS revenue rate could hardly exceed 12 percent of the value of imports (inclusive of duties). The higher rate for BLNS than the average for the SACU is estimated to stem from the composition of imports: (i) BLNS imports tend to consist relatively more of consumer goods, on which duties are higher; and (ii) a larger proportion of BLNS imports may be lower-cost goods subject to higher rates of levy under the use of specific and formula duties.

discretion have been higher than anticipated. Larger compensations are also
called for to provide for their developmental needs and to offset
polarization.

South Africa's response would be that BLNS are already receiving a
disproportionately large (and growing) share, at the artificially-set lower
limit. The South African authorities have estimated that the proper BLNS
share of the SACU revenue pool should be only 12 percent as against the 38
percent actually paid. 1/ In their view, it would be preferable that the
difference be allocated in the budget explicitly as development aid to those
countries. Besides the political impact, such a change would allow South
Africa a more flexible and effective use of excise taxes and tariffs. On
the SACU arrangement more generally, concerns have been expressed that the
free trade regime combined with lax customs controls by the BLNS have
permitted abuse of export incentive schemes.

The Southern African Development Community (SADC) and the Preferential Trade Area for Eastern and Southern Africa (PTA) 2/

SADC membership comprises ten countries in southern Africa, with its
secretariat in Gaborone. The BLNS countries are all members of the SADC.
It was established in 1980, with the objective of reducing the members'
economic dependence on South Africa and mobilizing resources for regional
policies. In view of the ongoing political transformation in South Africa,
the question was raised at the 1991 Annual Consultative Conference of the
SADC whether SADC had a role to play in a post-apartheid southern Africa.
Participants agreed, however, that the SADC should continue to aim at
reducing reliance on economies outside the region and at promoting
integration and development in southern Africa. SADC cooperation relies on
specific projects with regional content, such as transport and
communications, food security, energy conservation, health, fisheries; each
area is assigned to an individual member to lead and coordinate, and
projects are often financed through foreign donors.

The PTA, with its secretariat in Lusaka, has 18 members (eight of which
are also members of the SADC). Lesotho, Namibia and Swaziland are members
of the PTA, and Botswana is an associate member. The PTA became operational
in 1982, with its focuses on the promotion of intra-regional trade and
regional economic development. It is less pragmatic than the SADC, relying
on highly formalized multilateral agreements on issues such as trade reform
and monetary union. The PTA Clearing House, based in Harare, is among such

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1/ However, assuming the average revenue rate of 12 percent estimated by
the World Bank (instead of the 22 percent rate implied by the current
receipts), this share is closer to 21 percent.

2/ The SADC comprises Angola, Botswana, Lesotho, Malawi, Mozambique,
Namibia, Swaziland, Tanzania, Zambia and Zimbabwe. The PTA covers Angola,
Burundi, Comoros, Djibouti, Ethiopia, Kenya, Lesotho, Malawi, Mauritius,
Mozambique, Rwanda, Somalia, Swaziland, Sudan, Tanzania, Uganda, Zambia and
Zimbabwe. A full description of the SADC and the PTA can be found in
SM/91/196, Supplement 3, 1991.

initiatives. Preferential trade arrangements are to be a first major step toward further integration. A formula has been established for the gradual reduction of intra-area tariffs on items included in a growing "Common List", but the effectiveness of this scheme has been hampered by non-tariff barriers, especially import licensing and foreign exchange allocation requirements; intra-area trade is currently only 5-6 percent of total PTA trade.

Recent discussions on the possibility of greater regional integration have broached the idea of transforming the PTA into a Common Market for Eastern and Southern Africa (COMESA), aimed at market integration and co-operation. This would entail the removal of all remaining obstacles to trade and factor movements, the establishment of a custom union with common external tariffs, and cooperation in industrial development. At the same time, this group of countries has been active in devising the Initiative to Facilitate Cross-Border Private Investment, Trade and Payments (under co-sponsorship of the Commission of European Communities, the African Development Bank, the World Bank and the Fund). In this context, concerns have been raised that these initiatives not contain elements of discriminatory exchange and trade practice nor exacerbate "polarization" effects which would escalate adjustment costs in the industrially lagging economies.

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Southern African Customs Union (SACU): Base Revenue Sharing Formula

SACU's base revenue-sharing formula can be written as:

$$Y = 1.42 * H * \frac{A+B+C}{D+E+F+G}$$

where,

Y = Revenue received by a BLNS country;
A = CIF value of imports into that country irrespective of their origin, including all duties thereon; imports from other SACU members (including South Africa) are thus included;
B = Value of excisable duty goods produced and consumed in that country;
C = Excise duty paid on B;
D = CIF value of imports into SACU (excluding intra-SACU trade);
E = Customs duties paid on D;
F = Value of excisable duty goods produced and consumed in SACU area;
G = Excise duty paid on F; and
H = Total revenue pool of customs and excise duties, i.e., E+G.

The actual payments are corrected for the average revenue rate $R = H/(D+E+F+G)$, with a view to stabilizing the compensated average duty $R_1 = (1.42 * R)$ close to the ratio of 0.20 and in any case, within 0.17 and 0.23. Thus, the actual formula becomes:

$$Y^* = R^* * (A+B+C) \text{ , where}$$

R^* = Mid-point between R_1 and 0.20, subject to a minimum of 0.17 and a maximum of 0.23.

Payments in financial year t are based on the application of the formula on the data for the year t-2, with adjustments to take account of discrepancies between initial and final estimates for years t-2 and t-3. South Africa retains the remainder of the revenue pool after distribution to the BLNS countries. Revenue accruing to the TBVC homeland states comes out of the South African share.

Table 1. South Africa: Expenditure on GDP, 1988-93

	1992 Millions of rand	1992 Percent of GDP	1988	1989	1990	1991	1992	1992 I	1992 II	1992 III	1992 IV	1993 I	1993 II
	(At current prices)		(Annual percentage change; at 1985 prices)					(Seasonally adjusted at annual rate)					
Private consumption	203,407	62.2	5.3	2.8	2.1	0.3	-2.3	-3.3	-2.2	-0.9	-0.7	0.4	0.4
Public consumption	69,727	21.3	1.7	3.7	2.6	5.2	0.3	6.1	3.3	-3.2	1.0	0.1	0.1
Gross fixed investment	52,060	15.9	8.9	5.1	-2.0	-8.4	-9.9	-7.4	-7.4	-13.7	-5.1	-2.4	-1.3
Final demand	325,194	99.4	5.3	3.5	1.3	-0.5	-3.2	-2.2	-2.1	-3.7	-1.1	-0.1	0.1
Inventory investment 1/	-2,797	-0.9	1.4	-1.2	-2.7	0.3	1.0	12.2	-7.3	-5.8	2.1	12.0	-7.4
Domestic demand	322,397	98.6	6.9	2.1	-1.5	-0.2	-2.2	11.1	-9.6	-9.9	1.2	12.9	-7.7
Exports of goods and nonfactor services	78,070	23.9	9.8	4.6	1.9	0.3	1.0	-7.1	-0.3	30.4	-15.5	-13.7	45.4
Imports of goods and nonfactor services	65,285	20.0	21.9	-0.2	-5.8	2.1	5.4	29.3	-4.2	30.3	-4.8	6.0	-11.1
Foreign balance 1/	12,785	3.9	-2.1	1.5	2.1	-0.4	-1.0	-8.7	1.0	1.9	-4.4	-6.6	17.5
Statistical discrepancy 1/	8,114	-2.5	0.0	-1.1	-1.1	0.2	1.0	-2.9	5.7	1.9	-0.9	-3.3	-3.9
GDP at market prices	327,068	100.0	4.2	2.3	-0.5	-0.4	-2.1	-2.2	-2.8	-5.6	-4.3	1.4	5.1

Source: South African Reserve Bank, Quarterly Bulletin.

1/ Contribution to GDP growth.

Table 2. South Africa: Gross Fixed Investment and Capital Stock, 1988-92

	1992 Share of total	1988	1989	1990	1991	1992
		(Annual percentage change; at 1985 prices)				
Total gross investment	100.0	8.9	5.1	-2.0	-8.4	-9.9
By type of organization						
Private enterprises 1/	71.6	17.7	4.4	-1.3	-5.3	-5.3
Public corporations	9.2	-8.0	25.5	4.0	-28.3	-36.5
Public authorities	19.2	-2.6	-5.5	-9.6	-1.0	-8.2
By sector						
Mining	12.8	9.8	-1.4	-9.3	-15.4	-9.3
Manufacturing	25.8	21.1	34.0	24.3	-11.0	-11.2
Financial services 1/ 2/	24.8	17.7	2.7	-9.3	-7.0	-4.8
Community, social, and personal services	11.3	1.1	-1.5	-14.7	-7.4	-5.8
Other sectors	25.3	-0.4	-2.8	-6.4	-3.4	-15.0
By type of asset						
Residential building	13.4	3.1	-0.6	-10.1	-3.4	-4.2
Nonresidential building	15.4	6.1	13.4	10.0	-12.6	-11.7
Construction works	15.8	4.0	11.8	-6.6	-14.2	-14.7
Transport equipment	10.4	25.9	5.8	-10.3	-0.7	-17.5
Machinery and other equipment	41.1	9.7	2.0	0.3	-8.4	-7.8
Transfer costs	4.0	14.2	-4.3	2.8	3.3	1.6
Real fixed capital stock 3/	100.0	1.2	1.5	1.3	0.7	0.2
Private enterprises 1/	48.1	1.8	2.1	5.1	1.3	0.9
Public cooperatives	9.1	-1.3	0.4	-12.0	-2.3	-5.1
Public authorities	42.8	1.3	1.2	0.8	0.8	0.6

Source: South African Reserve Bank, Quarterly Bulletin.

1/ Including transfer costs.
2/ Finance, insurance, real estate, and business services.
3/ End of period.

Table 3. South Africa: Financing of Domestic Investment, 1987-92

(In percent of GDP at market prices)

	1987	1988	1989	1990	1991	1992
Gross private saving 1/	25.3	23.3	22.7	20.9	20.5	20.4
Less: Depreciation 2/	16.4	15.8	15.9	15.7	15.2	14.7
Net private saving	8.8	7.5	6.8	5.2	5.3	5.7
Net personal saving	3.1	2.2	1.2	0.7	1.0	1.7
Net corporate saving	5.7	5.3	5.7	4.5	4.3	4.0
Gross general government saving 1/	-1.8	-0.0	0.0	0.2	-2.3	-4.2
Less: Depreciation 2/	0.6	0.6	0.6	0.6	0.6	0.6
Net general government saving	-2.4	-0.6	-0.6	-0.4	-2.9	-4.8
Net domestic saving	6.4	6.8	6.3	4.8	2.4	0.9
Net foreign saving (current account surplus -)	-4.1	-1.7	-1.5	-2.0	-2.1	-1.2
Net domestic investment	2.3	5.1	4.8	2.8	0.4	-0.3

Source: South African Reserve Bank, Quarterly Bulletin.

1/ After inventory valuation adjustment.
2/ Provision for depreciation at replacement value.

Table 4. South Africa: Growth of Disposable Income of Households, 1988-92

	1992 Structure of disposable income	1988	1989	1990	1991	1992
	(In billions of rand)	(Percentage change from previous year)				
Net remuneration of employees 1/	179.1	16.7	18.0	17.6	14.7	13.2
Net income from property	52.3	21.3	22.3	9.8	28.1	20.6
Transfers received	11.8	10.8	11.9	38.8	12.5	16.2
General government	11.3	11.6	10.8	43.3	12.9	17.1
Business enterprises	0.1	6.7	16.2	4.3	10.3	10.3
Abroad	0.4	1.4	26.4	-13.3	4.0	-2.7
Current income	243.2	17.3	18.6	16.9	17.1	14.9
Less: Direct taxes	33.9	17.3	36.0	20.8	21.7	16.9
Personal disposable income	209.3	17.3	16.4	16.4	16.4	14.5
Less: Private consumer expenditure	203.4	19.3	18.5	17.4	15.8	13.5
Less: Transfers to general government and abroad	0.4	-0.3	-3.2	12.4	30.8	-4.4
Personal saving	5.5	-17.0	-37.0	-32.6	66.1	82.3
Personal saving/Personal disposable income 2/	2.6	3.7	2.0	1.2	1.6	2.6

Source: South African Reserve Bank, Quarterly Bulletin.

1/ After adjustment for net remuneration paid to the rest of the world.
2/ After provision for depreciation and inventory valuation adjustment.

Table 5. South Africa: Real Gross Domestic Product at Factor Cost, 1988-92

	1992 Billions of rand	1992 Percent of total	1988	1989	1990	1991	1992
	(At current prices)		(Annual percentage change; at 1985 prices)				
Primary sector	40.0	13.5	2.1	3.6	-3.4	-0.3	-7.9
Agriculture, forestry, and fishing	11.6	3.9	2.8	13.4	-7.4	2.1	-25.2
Mining and quarrying	28.4	9.6	1.7	-1.0	-1.2	-1.5	1.2
Industry sector	95.2	32.2	5.9	1.6	-0.7	-2.0	-2.8
Manufacturing	73.7	24.9	6.4	0.4	-1.3	-2.4	-2.9
Construction	8.8	3.0	3.2	7.9	-0.2	-4.5	-6.2
Electricity, gas, and water	12.7	4.3	5.0	3.2	1.7	1.9	-0.2
Service sector	160.4	54.3	3.2	2.1	0.6	0.3	0.1
Wholesale and retail trade	40.5	13.7	4.2	0.6	1.2	-1.2	-2.1
Transportation and communication	24.4	8.3	4.8	3.9	0.2	-1.5	0.9
Finance, insurance, real estate, and business	36.3	12.3	1.1	2.1	-0.1	1.2	0.4
General government and other services	59.2	20.0	3.1	2.3	0.9	1.4	0.8
GDP at factor cost	295.6	100.0	3.8	2.2	-0.6	-0.5	-2.3
Memorandum item:							
GDP less general government	249.1	84.3	3.9	2.3	-0.8	-0.9	-2.8

Source: South African Reserve Bank, Quarterly Bulletin.

Table 6. South Africa: Volume of Production and Capacity Utilization,
1986-93

		Volume of production			Capacity utilization		
		Durable goods	Nondurable goods	Total	Durable goods	Nondurable goods	Total
		(1985=100)			(In percent)		
1986		96.9	100.0	98.6	74.9	81.7	78.5
1987		98.7	104.0	101.6	77.0	83.3	80.3
1988		106.2	110.4	108.5	82.1	85.0	83.6
1989		107.9	109.9	109.0	83.7	85.1	84.5
1990		104.4	109.4	107.2	81.0	82.1	82.0
1991		99.3	108.0	104.1	77.8	82.7	81.1
1992		92.4	108.1	101.1	74.9	80.9	78.8
		(Period average; seasonally adjusted)					
1990							
Qtr	I	105.5	110.1	108.1	82.0	82.6	82.5
Qtr	II	105.1	109.1	107.3	81.1	81.7	81.8
Qtr	III	102.5	107.9	105.5	80.6	81.7	81.8
Qtr	IV	104.5	110.5	107.8	80.1	82.4	82.0
1991							
Qtr	I	100.1	108.3	104.7	79.1	82.7	81.7
Qtr	II	101.1	110.0	106.0	77.8	83.2	81.3
Qtr	III	99.3	105.7	102.9	77.2	82.5	80.8
Qtr	IV	96.6	107.9	102.9	77.2	82.2	80.5
1992							
Qtr	I	95.5	110.2	103.7	78.0	82.5	81.3
Qtr	II	91.3	107.9	100.5	75.4	81.4	79.2
Qtr	III	89.2	104.3	97.6	72.5	80.2	77.2
Qtr	IV	93.6	109.8	102.7	73.6	79.6	77.4
1993							
Qtr	I	93.5	111.3	103.5	73.5	80.4	78.2
Qtr	II	89.2	110.2	100.9	72.7	80.3	77.6

Source: South African Reserve Bank, Quarterly Bulletin.

Table 7. South Africa: Indicators of Mining and Quarrying Activity, 1985-92

	Weights 1/	1985	1986	1987	1988	1989	1990	1991	1992
				(Annual percentage change; in volume)					
Production	100.0	0.7	-3.0	-4.3	1.8	-1.4	-1.9	-2.3	1.1
Gold	49.9	-1.5	-4.9	-5.7	1.8	-1.7	-1.2	-1.0	2.8
Nongold	50.1	4.8	-0.1	-2.5	1.8	-0.7	-2.7	-3.6	-0.7
Of which:									
Coal	(21.5)	(9.5)	(1.8)	(0.1)	(0.6)	(-2.7)	(-0.9)	(-0.5)	...
Diamonds	(4.6)	(-0.6)	(-0.9)	(-6.7)	(-7.7)	(-3.6)	(-5.4)	(-3.9)	...
Copper	(2.8)	(-2.6)	(-4.5)	(-1.0)	(-8.8)	(18.0)	(-9.7)	(4.9)	...
Asbestos	(0.4)	(-9.8)	(-24.8)	(-8.7)	(2.8)	(12.2)	(-3.8)	(5.4)	...
Iron ore	(2.8)	(-0.1)	(-3.8)	(-12.6)	(15.3)	(18.6)	(4.6)	(-5.1)	...
Gross fixed investment at 1985 prices		7.5	0.9	5.0	9.8	-1.4	-9.3	-15.4	-9.3
Fixed capital stock at 1985 prices		5.4	4.8	4.8	5.3	4.5	2.9	1.0	0.1
				(Annual percentage change)					
Employment	100.0	4.0	3.7	--	-2.2	-1.4	-2.9	-7.4	-5.7
Gold	64.7	2.2	5.7	-0.1	-3.3	-3.1	-5.2	-10.2	...
Nongold	35.3	7.8	-0.5	0.4	-0.1	2.2	1.4	-2.3	...
Wage bill	100.0	16.4	21.0	20.1	14.0	14.4	15.1	6.7	...
Gold	60.1	13.0	22.4	21.7	14.4	10.8	10.4	2.2	...
Nongold	39.9	22.8	18.6	17.3	13.4	21.3	23.1	13.5	...
				(In percent)					
Memorandum items:									
Share in total capital stock at 1985 prices		7.5	7.8	8.1	8.4	8.6	8.8	8.8	8.8
Share in total nonagricultural employment		...	15.3	15.2	14.6	14.3	14.0	13.2	12.7
Share in real GDP at factor cost		14.8	14.3	13.4	13.2	12.8	12.7	12.6	13.0

Sources: South African Reserve Bank, _Quarterly Bulletin_; Central Statistical Service, _Bulletin of Statistics_.

1/ In 1985.

Table 8. South Africa: Nonagricultural Employment, 1986-93

(<u>1985 = 100</u>)

	Public Authorities 1/			Private sector			
	General govt.	Business enter- prises 2/	Total	Mining	Manufac- turing	Total 3/	Grand total
1986	103.2	96.3	101.7	103.7	99.2	100.1	100.5
1987	107.2	89.3	103.4	103.7	100.0	100.6	101.4
1988	110.1	85.7	104.8	101.4	101.6	102.2	102.9
1989	112.2	82.8	105.9	100.0	102.0	102.7	103.6
1990	112.9	81.1	106.0	97.1	102.2	102.0	103.2
1991	115.4	79.9	107.7	89.9	100.1	98.5	101.1
1992	116.4	76.6	107.8	84.8	97.5	95.7	99.1
(End of quarter: seasonally adjusted)							
1989							
I	111.2	84.9	105.4	100.8	101.6	102.8	103.5
II	112.1	84.1	106.0	99.4	102.1	102.9	103.8
III	112.8	83.9	106.5	99.6	102.1	102.7	103.8
IV	112.9	78.5	105.4	99.0	102.2	102.6	103.4
1990							
I	112.5	82.2	105.9	99.0	102.8	103.2	104.0
II	112.8	80.7	105.8	98.4	102.3	102.5	103.4
III	112.7	80.8	105.8	95.7	101.8	101.8	102.9
IV	113.6	80.6	106.4	93.3	101.5	100.6	102.3
1991							
I	115.2	80.3	107.6	90.6	100.6	99.4	101.7
II	115.1	79.7	107.4	90.6	100.1	98.5	101.0
III	115.1	80.0	107.4	89.4	99.7	98.2	100.8
IV	116.1	79.5	108.1	88.6	99.4	98.0	100.9
1992							
I	115.9	78.2	107.7	86.8	98.4	96.9	100.0
II	115.6	77.2	107.3	85.8	97.6	96.3	99.4
III	116.6	76.1	107.8	83.1	96.4	94.9	98.6
IV	117.5	74.9	108.2	82.2	97.2	94.8	98.6
1993							
I	117.2	70.1	106.9	...	...	...	...

Source: South African Reserve Bank, <u>Quarterly Bulletin</u>.

1/ Central Government, local authorities, provincial administrations, statutory bodies, and national and independent states (TVBC).
2/ Transnet and the Department of Posts and Telecommunications.
3/ Includes Electricity Supply Commission, Boards of Control, and universities.

Table 9. South Africa: Remuneration, Productivity, and Unit
Labor Costs in the Nonagricultural Sector, 1988-93

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1992 1/ | | | | 1993 1/ |
						I	II	III	IV	I
				(Percentage change from year earlier)						
Remuneration per worker										
At current prices										
Public authorities	12.3	21.9	17.5	17.3	15.3	16.2	17.4	14.5	13.1	14.0
Private sector	16.7	16.2	16.6	14.8	15.0	15.9	15.9	14.6	15.8	13.9
Total	15.3	18.0	16.9	15.8	15.2	16.1	16.5	14.7	15.0	14.0
At constant prices 2/										
Public authorities	-1.6	5.5	2.1	2.7	2.6	2.4	4.5	1.7	2.3	2.6
Private sector	2.0	1.1	1.7	0.9	3.0	2.1	3.1	1.8	4.6	2.7
Total	0.8	2.5	1.8	1.7	2.9	2.2	3.7	2.0	3.9	2.7
Labor productivity	2.3	0.9	0.3	1.4	1.2	1.3	1.2	1.4	1.7	1.6
Unit labor costs										
Nominal	13.0	17.2	16.6	14.5	13.9	14.7	15.2	13.1	13.1	12.2
Real 2/	-1.1	1.5	1.3	0.3	1.4	1.1	2.5	0.5	2.1	1.5

Source: South African Reserve Bank, _Quarterly Bulletin_.

1/ Seasonally adjusted.
2/ At 1985 prices; deflated by non-agricultural deflator.

Table 10. South Africa: Price Developments, 1988-93

(Percentage change over the previous period)

	Weight 1/	1988	1989	1990	1991	1992	1992				1993		
							I	II	III	IV	I	II	III
							(Seasonally adjusted at annual rate)						
Consumer prices	100.0	12.9	14.7	14.3	15.3	13.9	11.8	13.9	9.8	3.0	12.0	15.4	7.4
Goods	57.9	14.5	15.2	15.5	17.0	16.3	14.8	15.3	16.4	6.7	8.0	16.4	6.5
Of which:													
Food	19.3	(15.8)	(11.1)	(16.0)	(19.6)	(24.8)	(18.9)	(24.2)	(24.9)	(1.1)	(5.4)	(1.1)	(7.5)
Services	42.1	10.0	13.6	12.2	12.6	11.2	9.8	11.4	7.8	0.4	6.2	19.6	14.0
Of which:													
Housing	21.4	(8.6)	(13.8)	(9.2)	(5.6)	(1.9)	(1.9)	(0.7)	(-4.3)	(-4.1)	(-4.3)	(4.0)	(11.7)
Producer prices	100.0	13.1	15.2	12.0	11.4	8.2	6.4	12.5	9.2	--	10.8	5.5	...
Goods produced in													
South Africa	80.5	13.8	14.7	12.5	12.1	9.1	4.9	11.9	11.5	4.5	6.5	7.1	...
Imported goods	19.5	10.9	16.3	10.1	8.3	4.2	-0.5	10.1	15.3	-10.1	4.3	21.6	...
GDP deflator at													
market prices		15.5	15.2	13.7	13.2	12.1	11.4	9.1	15.4	13.9	9.4	6.1	...
Memorandum items:													
Twelve month rate to end of period													
Consumer prices		12.4	15.6	14.4	16.0	9.5	15.6	15.0	13.5	9.5	9.6	10.0	9.1
Producer prices		14.3	14.5	13.6	8.2	6.9	8.3	9.6	8.6	6.9	8.0	6.3	...

Source: South African Reserve Bank, Quarterly Bulletin.

1/ 1990 weights for consumer price series; 1985 weights for producer price series.

Table 11. South Africa: Central Government Finance, 1988/89 - 1993/94 1/

	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94 Budget
			(In millions of rand)			
Revenue	48,672	64,096	67,122	73,106	76,901	88,895
Total Inland Revenue 2/	41,102	52,297	58,231	63,458	65,012	76,458
Income tax	24,481	31,615	35,979	41,104	43,620	48,132
Sales tax and VAT	12,945	16,523	18,016	18,182	16,441	23,476
Other 3/	3,676	4,160	4,237	4,172	4,952	4,850
Total Customs and Excise	6,970	8,804	8,571	8,839	10,774	11,752
Of which:						
Import duties	(4,342)	(4,819)	(4,577)	(4,192)	(4,500)	(4,767)
Excise duty	(2,509)	(2,842)	(3,345)	(3,825)	(4,436)	(4,856)
Fuel levy	(2,458)	(3,909)	(3,930)	(5,194)	(6,777)	(7,633)
Payments 4/	-2,355	-2,850	-3,399	-4,500	-5,109	-5,675
Extraordinary revenue	600	2,994	319	809	1,144	685
Expenditure	55,927	65,459	73,947	85,861	103,770	114,154
Of which:						
Protection services	(11,441)	(13,247)	(15,168)	(15,790)	(...)	(17,531)
Transfers to homelands	(6,012)	(7,237)	(9,160)	(11,831)	(...)	(16,138)
Cost of debt service	(8,052)	(10,312)	(11,580)	(13,886)	(...)	(20,855)
Balance	-7,255	-1,364	-6,826	-12,755	-26,870	-25,258
Memorandum items:			(In percent of GDP)			
Revenue	23.5	26.5	24.7	23.8	23.1	24.6
Income tax	11.8	13.1	13.2	13.4	13.1	12.9
Sales tax/VAT	6.3	6.8	6.6	5.9	4.9	6.3
Other inland revenue	1.8	1.7	1.6	1.4	1.5	1.3
Customs and excise	3.4	3.6	3.2	2.9	3.2	3.2
Extraordinary revenue	0.3	1.2	0.1	0.3	0.3	0.2
Expenditure	27.0	27.1	27.2	28.0	31.2	30.7
Balance	-3.5	-0.6	-2.5	-4.2	-8.1	-6.8
Balance excluding extraordinary revenue	-3.8	-1.8	-2.6	-4.4	-8.4	-7.0
GDP (current prices; fiscal year; billions of rand)	206.9	241.6	271.8	307.1	332.7	372.0

Source: Department of Finance.

1/ Fiscal year begins April 1.
2/ Excludes amounts payable to homelands.
3/ Includes stamp duties, transfer duties, departmental receipts, interest and marketable securities tax.
4/ Under the Customs Union agreement.

Table 12. South Africa: Central Government Revenue, 1987/88 - 1993/94 1/

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94 Budget
	(In millions of rand)						
Inland revenue 2/	34,251	41,102	52,297	58,231	63,458	65,012	76,458
Income tax	20,446	24,481	31,615	35,979	41,104	43,620	48,132
Gold mines	2,075	1,695	1,016	644	524	422	500
Other mines	763	857	1,258	1,557	712	463	425
Nonmining companies	5,806	8,096	10,788	11,654	12,276	11,898	11,076
Individuals	11,803	13,832	18,553	22,124	27,591	30,837	36,131
Sales tax and VAT	10,154	12,945	16,523	18,016	18,182	16,441	23,476
Other 3/	3,650	3,676	4,160	4,237	4,172	4,952	4,850
Customs and excise	3,434	6,970	8,804	8,571	8,839	10,744	11,752
Customs duty	1,769	2,466	2,194	2,502	2,736	2,961	3,132
Surcharge	743	1,876	2,625	2,075	1,456	1,521	1,635
Excise duty	2,184	2,509	2,842	3,345	3,825	4,436	4,856
Fuel levy	640	2,458	3,909	3,930	5,194	6,777	7,633
Other	12	17	84	118	128	159	171
Payments 4/	-1,913	-2,355	-2,850	-3,399	-4,500	-5,109	-5,675
Total revenue 5/	37,685	48,072	61,101	66,802	72,297	75,757	88,210
Memorandum items:							
Direct taxes	20,966	24,993	32,205	36,636	41,724	44,220	48,807
Indirect taxes	14,721	21,064	26,962	28,524	28,771	29,015	37,199
Nontax revenue	1,998	2,015	1,935	1,643	1,802	2,521	2,204

Source: Department of Finance.

1/ Fiscal year begins April 1.
2/ Excludes amounts payable to homelands.
3/ Includes stamp duties, transfer duties, departmental receipts, interest, and marketable securities tax.
4/ Under the Customs Union agreement.
5/ Excludes extraordinary receipts.

Table 13. South Africa: Central Government Revenue, 1987/88 - 1993/94 1/

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94 Budget
				(In percent of GDP)			
Inland revenue 2/	20.0	19.9	21.6	21.4	20.7	19.5	20.6
Income tax	11.9	11.8	13.1	13.2	13.4	13.1	12.9
Gold mines	1.2	0.8	0.4	0.2	0.2	0.1	0.1
Other mines	0.4	0.4	0.5	0.6	0.2	0.1	0.1
Nonmining companies	3.4	3.9	4.5	4.3	4.0	3.6	3.0
Individuals	6.9	6.7	7.7	8.1	9.0	9.3	9.7
Sales tax and VAT	5.9	6.3	6.8	6.6	5.9	4.9	6.3
Other 3/	2.1	1.8	1.7	1.6	1.4	1.5	1.3
Customs and excise	2.0	3.4	3.6	3.2	2.9	3.2	3.2
Customs duty	1.0	1.2	0.9	0.9	0.9	0.9	0.8
Surcharge	0.4	0.9	1.1	0.8	0.5	0.5	0.4
Excise duty	1.3	1.2	1.2	1.2	1.2	1.3	1.3
Fuel levy	0.4	1.2	1.6	1.4	1.7	2.1	2.1
Other	--	--	--	--	--	--	--
Payments 4/	-1.1	-1.1	-1.2	-1.3	-1.5	-1.5	-1.5
Total revenue 5/	22.0	23.2	25.3	24.6	23.5	22.8	23.7
Memorandum items:							
Direct taxes	12.2	12.1	13.3	13.5	13.6	13.3	13.1
Indirect taxes	8.6	10.2	11.2	10.5	9.4	8.7	10.0
Nontax revenue	1.2	1.0	0.8	0.6	0.6	0.8	0.6
GDP (current prices; fiscal year; billions of rand)	171.3	206.9	241.6	271.8	307.1	332.7	372.0

Source: Department of Finance.

1/ Fiscal year begins April 1.
2/ Excludes amounts payable to homelands.
3/ Includes stamp duties, transfer duties, departmental receipts, interest, and marketable securities tax.
4/ Under the Customs Union agreement.
5/ Excludes extraordinary receipts.

Table 14.   South Africa: Expenditure of General Government by Function, 1990/91 - 1993/94 1/

	1990/91	1991/92	1992/93 Estimate 2/	1993/94 Budget
		(In millions of rand)		
Protection services	18,084	19,229	21,166	22,735
Defense	10,488	10,793	10,803	10,666
Other 3/	8,741	10,486	10,363	12,069
Social services	41,841	48,981	51,758	55,935
Education	19,929	23,263	24,393	27,263
Non-tertiary	17,093	20,224	21,018	23,328
Tertiary	2,836	3,039	3,375	3,935
Health	10,630	11,693	12,709	12,942
Social security and welfare	7,431	9,081	10,031	10,555
Housing and related services	1,555	2,272	1,256	1,603
Other 4/	2,296	2,672	3,369	3,572
Economic services	12,530	14,830	18,409	16,918
Agriculture, forestry, and fishing	2,392	3,293	6,059	3,044
Transport and communication	4,402	4,688	5,628	6,350
Other economic services 5/	5,736	6,849	6,722	7,524
Of which: export trade promotion	(931)	(1,623)	(2,662)	(2,684)
Other noninterest 6/	8,743	8,644	9,223	9,388
Interest	14,460	16,784	17,530	22,150
Total general government expenditure	96,803	110,518	118,086	127,126

Source: Department of Finance

1/   Fiscal year begins April 1.
2/   Budget Review, 1993
3/   Police, prisons and law courts.
4/   Recreation and culture, community development, other community services and sewerage and sanitation.
5/   Including water, fuel and energy, mining, manufacturing and regional development.
6/   Including foreign affairs, general research, general administration, cost of raising loans, unallocable capital expenditure, and certain transfers to government enterprises.

Table 15.   South Africa: Expenditure of General Government by Function,
1990/91 - 1993/94 1/

	1990/91	1991/92	1992/93 Estimate 2/	1993/94 Budget
		(In percent of GDP)		
Protection services	6.7	6.3	6.4	6.1
Defense	4.2	3.4	3.2	2.9
Other 3/	2.5	2.8	3.1	3.2
Social services	12.6	13.6	15.6	15.0
Education	6.4	6.5	7.3	7.3
Non-tertiary	5.5	5.6	6.3	6.3
Tertiary	0.9	0.9	1.0	1.1
Health	3.1	3.5	3.8	3.5
Social security and welfare	2.1	2.4	3.0	2.8
Housing and related services	0.5	0.5	0.4	0.4
Other 4/	0.6	0.8	1.0	1.0
Economic services	4.5	5.0	6.3	5.2
Agriculture, forestry, and fishing	0.7	0.9	1.8	0.8
Transport and communication	1.5	1.3	1.7	1.7
Other economic services 5/	2.0	1.9	2.0	2.0
Of which: export trade promotion	(0.3)	(0.8)	(0.8)	(0.7)
Other noninterest 6/	2.6	2.5	2.8	2.5
Interest	4.5	4.7	5.3	6.0
Total general government expenditure	30.9	32.2	36.3	34.8
Memorandum Item				
GDP (current prices; fiscal year; billions of rand)	271.8	307.1	332.7	372.0

Source: Department of Finance.

1/   Fiscal year begins April 1.
2/   Budget Review, 1993.
3/   Police, prisons and law courts.
4/   Recreation and culture, community development, other community
services and sewerage and sanitation.
5/   Including water, fuel and energy, mining, manufacturing and regional
development.
6/   Including foreign affairs, general research, general administration,
cost of raising loans, unallocable capital expenditure, and certain
transfers to government enterprises.

Table 16. South Africa: Financing of the Central Government Budget Deficit, 1987/88-1993/94 1/

(In millions of rand)

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94 Budget
Deficit before borrowing 2/	-10,305	-8,533	-3,895	-7,578	-14,084	-29,327	-25,944
Government stock	9,776	9,084	8,271	10,752	13,329	28,211	24,897
Loan levy	-2	-2	705	1	2	--	--
Foreign loans	-90	-93	-174	-118	1,430	-342	-100
Use of cash balances	414	-1,056	-6,562	2,838	314	6,092	-78
Unusual receipts	208	600	2,975	319	809	1,144	685
Privatization	...	...	2,975	--	--	108	--
National Supplies Procurement and Central Energy Funds	...	...	--	319	809	1,036	685
Unusual transfers	--	--	-1,320	-6,216	-1,800	-5,777	--
Gold and Foreign Exchange Contingency	--	--	-1,320	-3,000	--	-3,777	--
Government Pension Funds	--	--	--	-1,000	-1,000	-2,000	--
Independent Development Trust	--	--	--	-2,000	--	--	--
Other	--	--	--	-216	-800	--	--
Total financing	10,305	8,533	3,895	7,578	14,084	29,327	25,944

Source: South African Reserve Bank, Quarterly Bulletin.

1/ Fiscal year begins April 1.
2/ Reserve Bank data for the central government deficit differ from Department of Finance data due to, inter alia, the treatment of privatization receipts as a source of financing by the former and revenue by the latter.

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APPENDIX

Table 17. South Africa: Central Government Debt, 1988-92

	1988	1989	1990	1991	1992
	(In millions of rand; end of period)				
External debt	2,399	2,033	1,957	2,099	2,367
Domestic debt	64,731	79,091	89,264	112,470	136,229
Marketable	58,608	74,354	83,240	103,403	130,816
Bonds	58,525	72,031	79,301	100,114	122,035
Bills	84	1,625	3,234	2,580	8,072
Loan levies	--	698	705	709	710
Nonmarketable	6,123	4,737	6,023	9,066	5,413
Bonds	2,486	1,934	1,213	1,124	1,128
Bills	3,632	2,800	4,807	7,940	4,281
Loan levies 1/	5	4	3	3	3
Gold and foreign exchange contingency reserve account 2/	2,554	10,158	11,140	10,351	8,731
Total government debt	69,684	91,282	102,361	124,920	147,327
(In percent of GDP)	35.2	39.1	38.7	41.9	45.0
	(In percent of total debt)				
External government debt 3/	3.4	2.2	1.9	1.7	1.6
Domestic government debt	92.9	86.6	87.2	90.0	92.5
Marketable	84.1	81.5	81.3	82.8	88.8
Nonmarketable	8.8	5.2	5.9	7.3	3.7

Source: South African Reserve Bank, Quarterly Bulletin.

1/ Including tax exemption certificates and personal saving.
2/ Includes loses on forward exchange cover provided by the Reserve Bank.
3/ Adjusted for exchange rate changes.

Table 18. South Africa: Public Sector Enterprises, 1987-92

	1987	1988	1989	990	1991	1992
			(In millions of rand)			
Contribution of public enterprises to:						
Gross domestic product 1/	21,660	26,369	29,603	29,381	33,310	36,103
Total fixed investment 1/	8,288	8,721	11,259	12,842	12,036	9,815
Fixed capital stock 2/	117,252	116,626	116,748	110,994	110,066	107,804
			(In thousands)			
Total employment 3/	...	...	346.0	338.1	341.6	312.8
			(In percent of total)			
Share of public sector enterprises to:						
Gross domestic product 1/	16.2	13.3	12.7	11.1	11.2	11.0
Total fixed investment 1/	26.3	22.1	23.2	24.2	22.4	18.9
Fixed capital stock 2/	30.6	30.0	29.6	27.8	27.4	26.8
Total employment 4/	...	...	6.4	6.3	6.5	6.1

Source: South African Reserve Bank, Quarterly Bulletin; Policy Unit for Public Enterprise and Privatization; and data provided by the South African authorities.

1/ In current prices.
2/ In 1985 prices.
3/ Includes statutory bodies, Agricultural Boards of Control, Transnet, South African Post Office, Telkom, Eskom, Denel (for 1991 and 1992), and Alexkor. Data are for fiscal year beginning April 1.
4/ Non-agricultural employment.

Table 19.   South Africa: Growth Rates of
Monetary Aggregates, 1982-93 1/

(In percent)

	M1A	M1	M2	M3
Changes in the year to the end of:				
1982	2.5	18.8	16.6	15.3
1983	24.7	37.7	22.7	16.4
1984	14.0	33.6	24.3	18.0
1985	19.8	-7.3	14.1	12.3
1986	20.5	12.8	4.3	9.3
1987	24.8	33.8	21.1	16.9
1988	25.0	22.7	35.1	27.2
1989 March	19.3	19.0	33.3	26.5
June	10.9	12.5	29.9	26.3
September	10.3	12.5	27.1	22.9
December	10.4	10.2	27.1	22.6
1990 March	6.9	18.1	23.2	20.2
June	10.7	15.7	20.5	16.8
September	9.8	6.8	13.5	12.9
December	14.3	15.9	13.1	12.2
1991 March	13.6	9.5	16.8	14.5
June	17.0	15.5	20.3	15.7
September	26.2	24.4	22.9	15.5
December	17.7	14.8	16.1	12.5
1992 March	25.2	14.2	11.8	9.2
June	18.6	11.1	11.8	7.4
September	23.6	23.2	12.8	8.7
December	16.2	17.5	10.8	8.0
1993 March	19.4	10.4	5.1	5.7
June	18.1	11.0	1.8	3.3

Source: South African Reserve Bank, Quarterly Bulletin.

1/   M1A includes coins and bank notes in circulation and check and
transmission deposits with banking institutions, building societies,
and the Post Office Savings Bank.   M1 is defined as M1A plus other demand
deposits with banking institutions.   M2 is defined as M1 plus other
short-term deposits and medium-term deposits with banking institutions
and building societies (including, for the latter, savings deposits and
certain "share" investments), plus savings deposits with, and savings bank
certificates of, the Post Office Savings Bank.   M3 is defined as M2 plus
all long-term deposits with banking institutions and building societies
(including, for the latter, other "share" investments), plus investments
in national savings certificates issued by the Post Office Savings Bank.

Table 20. South Africa: Monetary Survey, 1988-93

	1988	1989	1990	1991	1992	1993 June
	(In billions of rand)					
Broad money (M3)	117.9	144.6	162.3	182.6	197.2	195.7
Coin and notes	5.9	7.2	8.1	8.8	9.5	10.0
Private deposits	112.0	137.4	154.2	173.8	187.7	185.7
Counterparts to broad money						
Net foreign assets	-0.1	-2.4	0.3	1.1	-0.1	-0.5
Short-term	-0.8	-3.2	-0.8	0.2	-1.8	-2.3
Gross reserves	6.7	6.9	7.3	9.8	11.2	10.2
Reserve Bank	4.9	5.3	6.2	8.2	9.1	7.5
Commercial banks	1.8	1.6	1.1	1.7	2.1	2.7
Liabilities	-7.5	-10.1	-8.1	-9.7	-13.0	-12.6
Reserve Bank	-1.3	-1.5	-0.8	-0.1	-0.9	-1.6
Commercial banks	-6.2	-8.7	-7.3	-9.5	-12.1	-10.9
Long-term foreign asset	0.7	0.8	1.1	0.9	1.7	1.9
Net domestic assets	118.1	147.0	162.0	181.6	197.3	196.2
Government	3.5	0.8	5.9	3.6	7.2	2.4
Claims on Government	13.6	16.0	18.9	20.5	20.7	19.5
Government deposits	-10.0	-15.2	-13.0	-16.9	-13.5	-17.0
Claims on private sector	121.1	145.5	168.3	192.7	209.5	212.6
Other items, net	-6.6	0.7	-12.3	-14.7	-19.4	-18.8
Other assets	20.4	27.4	30.5	49.4	47.4	47.5
Capital and reserves	-7.2	-8.2	-10.2	-12.2	-16.1	-17.7
Other liabilities	-19.8	-18.5	-32.5	-52.0	-50.7	-48.6
Contributions to growth of M3 1/	(In percent)					
Net foreign assets	-4.0	-1.9	1.8	0.5	-0.6	-1.7
Short-term	-3.5	-2.0	1.7	0.6	-1.1	-1.8
Long-term	-0.6	0.1	0.2	-0.1	0.4	0.2
Net domestic assets	31.2	24.5	10.4	12.1	8.6	5.0
Government	-0.1	-2.3	3.5	-1.4	2.0	0.5
Claims on Government	1.9	2.1	2.0	1.0	0.1	-1.3
Government deposits	-2.0	-4.4	1.5	-2.4	1.9	1.8
Claims on private sector	28.3	20.7	15.8	15.0	9.2	7.4
Other items, net	3.0	6.1	-9.0	-1.5	-2.5	-2.9
Growth of broad money	27.2	22.6	12.2	12.5	8.0	3.3
Memorandum items:						
Income velocity of M3	1.88	1.78	1.72	1.73	1.72	...
Bills discounted by Reserve Bank (in billions of rand) 2/	2.1	3.5	3.0	2.8	3.7	0.2
Deposits at Reserve Bank (in billions of rand)	6.9	11.9	8.9	13.1	8.6	8.3

Source: South African Reserve Bank, Quarterly Bulletin.

1/ For June 1993, percentage contribution relative to June 1992.
2/ Includes overnight loans system introduced in May 1993.

Table 21. South Africa: Changes in Bank Credit, 1988-93 1/

| | Credit to the private sector | | | | | | Credit to Government, net | Total bank credit | Credit to the private sector | Credit to the Government, net | Total bank credit |
	Bills discounted, deposits, and investments	Hire purchase credit	Leasing finance 2/	Mortgage advances	Other loans and advances	Total					
	(Change from previous period; in millions of rand)								(Percentage change from year ago)		
1988	2,259	2,643	2,217	9,806	9,335	26,258	-129	26,129	27.7	-3.5	26.5
1989	1,618	3,178	2,141	7,641	9,863	24,441	-2,757	21,684	20.2	-77.9	17.4
1990	3,572	2,454	1,847	7,612	7,339	22,826	5,131	27,956	15.7	655.3	19.1
1991	1,995	1,205	2,258	10,729	8,144	24,330	-2,301	22,030	14.5	-38.9	12.6
1992	2,463	293	1,266	12,160	632	16,815	3,597	20,412	8.7	99.6	10.4
1989 March	39	798	410	1,973	2,510	5,730	-58	5,672	25.7	-21.5	23.7
June	-1,468	923	410	2,029	2,467	4,362	314	4,676	25.3	-32.9	22.3
September	1,823	677	748	1,686	1,401	6,333	-1,660	4,673	20.5	-42.7	18.5
December	1,224	780	573	1,953	3,485	8,016	-1,353	6,663	20.2	-77.9	17.4
1990 March	45	255	419	1,587	1,176	3,483	-535	2,948	17.5	-92.9	14.6
June	1,371	746	303	1,838	2,072	6,331	1,451	7,782	18.4	-55.2	16.3
September	22	735	571	2,160	-285	3,202	-1,350	1,851	15.3	-83.7	13.8
December	2,134	718	554	2,027	4,376	9,810	5,565	15,375	15.7	655.3	19.1
1991 March	1,600	-84	169	2,487	4,630	8,801	-3,352	5,450	18.9	933.1	20.4
June	-1,924	334	381	2,736	2,525	4,053	921	4,975	16.7	105.0	17.6
September	1,660	284	846	2,837	964	6,591	-1,012	5,578	18.5	608.0	19.7
December	659	671	862	2,669	25	4,885	1,142	6,027	14.5	-38.9	12.6
1992 March	-1,818	-894	630	2,819	1,352	2,090	-980	1,109	9.9	2.8	9.8
June	1,778	168	347	2,833	-1,260	3,866	-1,144	2,723	9.6	-57.2	8.4
September	2,343	492	70	3,064	-645	5,322	1,049	6,372	8.6	2.7	8.5
December	160	527	219	3,444	1,185	5,537	4,672	10,208	8.7	99.6	10.4
1993 March	-1,505	-33	167	3,585	151	2,363	-1,327	1,036	8.8	123.4	10.3
June	-2,311	1,135	-141	3,217	-1,188	713	-3,449	-2,736	7.0	63.5	7.4

Sources: South African Reserve Bank, Quarterly Bulletin.

1/ Credit extended by the banking sector which comprises the Reserve Bank, the former National Finance Corporation, the Corporation for Public Deposits and the so-called "pooled" funds of the former Public Debt Commissioners, the discount houses, the short-term business of the Land Bank, the commercial and merchant banks, and other general banking institutions.

2/ Excluding unearned finance charges.

Table 22. South Africa: Interest Rate Developments, 1989-93

(In percent per annum)

		Short-term rates				Long-term rates	
	Bank rate 1/	Clearing bank prime overdraft rate	Rate on three-month deposits with commercial banks	Rate on interbank deposits at call	Treasury bill rate 2/	Government bond yield 3/	Predominant rate on new mortgages: participa- tion bonds 4/
1989 March	14.5	19.0	17.5	16.8	16.0	16.9	18.4
June	17.0	20.0	18.5	20.0	17.2	17.2	19.5
September	17.0	20.0	18.2	18.8	17.1	16.8	19.5
December	18.0	21.0	19.8	21.0	18.0	15.8	20.0
1990 March	18.0	21.0	19.2	19.5	17.9	15.7	20.0
June	18.0	21.0	19.5	21.0	18.0	16.7	20.5
September	18.0	21.0	18.0	18.5	17.5	16.4	20.5
December	18.0	21.0	18.2	18.8	17.4	16.0	20.5
1991 January	18.0	21.0	17.8	18.2	17.3	16.0	20.5
February	18.0	21.0	17.8	18.5	17.1	15.6	20.5
March	17.0	21.0	17.4	17.8	16.9	15.6	20.5
April	17.0	20.0	17.2	17.0	16.8	15.8	20.5
May	17.0	20.0	17.2	17.2	16.7	16.0	20.5
June	17.0	20.0	17.2	16.8	16.7	16.3	19.5
July	17.0	20.0	17.2	17.0	16.7	16.4	19.5
August	17.0	20.0	17.2	17.0	16.7	16.8	19.5
September	17.0	20.0	17.2	16.5	16.6	16.8	19.5
October	17.0	20.2	17.2	16.2	16.4	17.2	19.5
November	17.0	20.2	17.0	16.0	16.2	16.8	18.9
December	17.0	20.2	17.0	16.0	16.1	16.7	18.9
1992 January	17.0	20.2	16.5	16.0	16.0	16.6	18.9
February	17.0	20.2	16.0	15.8	15.9	16.9	18.9
March	16.0	20.2	15.5	15.5	15.5	16.4	18.9
April	16.0	19.2	15.4	15.1	15.0	16.3	18.9
May	16.0	19.2	14.3	14.3	14.4	16.0	18.9
June	15.0	19.2	13.5	13.8	14.0	16.0	18.9
July	15.0	18.4	12.8	15.9	13.5	15.3	18.4
August	15.0	18.2	12.2	12.9	12.7	14.4	18.4
September	15.0	18.2	12.2	13.0	12.1	14.2	18.4
October	15.0	18.2	12.8	12.8	12.1	13.9	17.0
November	14.0	18.0	12.0	12.2	12.0	14.5	17.0
December	14.0	17.2	12.1	12.0	12.0	14.9	15.9
1993 January	14.0	17.1	12.0	11.9	11.9	14.6	15.9
February	13.0	16.2	11.8	11.0	11.4	14.4	...
March	13.0	16.2	11.9	10.9	11.3	14.5	...
April	13.0	16.2	12.2	11.0	11.1	15.0	...
May	13.0	16.2	12.0	11.1	11.5	14.9	...
June	13.0	16.2	12.0	10.8	11.9	14.7	...
July	13.0	16.2	12.0	10.8	11.8	14.2	...
August	13.0	16.2	...	11.2	11.7	13.8	...

Sources: International Monetary Fund, International Financial Statistics; and data provided by the South African authorities.

1/ Until April 1993, Reserve Bank's discount rate for treasury bills. Thereafter, accommodation rate for overnight loans using government paper as collateral.
2/ Averages for each Friday of the month.
3/ Average yield on government bonds with a maturity of more than ten years.
4/ End of period.

Table 23. South Africa: Balance of Payments, 1984-92

(In millions of U.S. dollars)

	1984	1985	1986	1987	1988	1989	1990	1991	1992
Current account balance	-1,706	2,338	2,771	3,295	1,489	1,322	2,057	2,241	1,382
Trade balance	2,024	5,376	6,488	7,282	5,464	5,056	6,764	6,125	5,430
Exports	16,581	15,802	17,798	21,334	22,805	21,937	23,539	23,288	23,624
Net nongold, f.o.b.	8,663	8,863	10,476	12,579	14,136	14,638	16,515	16,194	17,187
Gold	7,918	6,940	7,322	8,755	8,669	7,299	7,024	7,094	6,437
Imports, f.o.b.	-14,556	-10,426	-11,310	-14,052	-17,340	-16,881	-16,775	-17,163	-18,194
Nonfactor services	-1,618	-1,139	-1,550	-1,820	-1,827	-1,418	-1,518	-1,451	-1,855
Credits	2,431	2,038	2,155	2,581	2,696	3,270	3,836	3,711	3,829
Debits	-4,049	-3,177	-3,705	-4,400	-4,522	-4,688	-5,353	-5,162	-5,684
Factor services	-2,148	-1,918	-2,197	-2,148	-2,190	-2,394	-3,261	-2,506	-2,298
Credits	690	974	1,165	1,327	1,214	1,132	549	775	838
Debits	-2,838	-2,891	-3,362	-3,475	-3,403	-3,526	-3,810	-3,281	-3,136
Interest	-1,969	-2,138	-2,149	-2,008	-2,140	-2,245	-2,463	-2,078	-1,890
Dividends and profits	-682	-585	-1,022	-1,256	-1,085	-1,112	-1,179	-1,084	-1,148
Taxes	-186	-167	-191	-211	-179	-168	-167	-120	-98
Transfers	37	19	30	-19	40	78	71	73	105
Private	58	2	-12	11	7	41	-33	-27	32
Official	-21	17	42	-30	33	37	104	100	73
Capital account balance	780	-3,789	-2,315	-1,751	-3,020	-1,794	-931	-1,730	-2,178
Long-term capital, net	1,769	-234	-1,385	-836	-516	-231	-39	-627	-530
Private	571	-415	-1,218	-976	-43	-52	-237	-1,007	-833
Public	1,198	180	-166	140	-473	-179	197	381	303
Short-term capital, net	-49	-2,664	-1,073	-301	-1,651	-1,292	-787	-285	-476
Private	-39	-2,627	-944	-285	-1,641	-1,055	-804	-134	-462
Public	-10	-37	-129	-16	-11	-236	17	-151	-14
Errors and omissions	-939	-891	143	-614	-852	-271	-105	-818	-1,173
Change in net reserves	-926	-1,452	456	1,544	-1,531	-472	1,126	511	-797
Change in liabilities relating to reserves	323	897	-961	-618	792	1,001	-786	578	1,174
SDR allocations and Valuation adjustments	843	809	433	162	196	-454	-201	-170	114
Change in gross reserves	241	254	-72	1,088	-543	76	139	920	491
Memorandum item:									
Current account/GDP (in percent)	-2.3	4.2	4.5	4.1	1.7	1.5	2.0	2.1	1.2

Source: South African Reserve Bank, Quarterly Bulletin; and staff calculations.

Table 24. South Africa: Quarterly Balance of Payments, 1990-93

(In millions of U.S. dollars)

	1990		1991				1992				1993	
	III	IV	I	II	III	IV	I	II	III	IV	I	II
					(Seasonally adjusted figures)							
Nongold exports, f.o.b.	4,068	4,560	3,996	3,918	4,125	4,150	4,207	4,354	4,465	4,170	3,783	4,401
Net gold exports 1/	1,734	1,809	1,681	1,808	1,722	1,878	1,606	1,470	1,837	1,533	1,686	1,738
Imports, f.o.b.	4,380	4,228	4,457	4,318	4,255	4,146	4,382	4,322	4,996	4,507	4,514	4,390
Trade Balance	1,421	2,141	1,220	1,407	1,591	1,882	1,430	1,502	1,307	1,196	955	1,749
Net services and transfers	-1,195	-1,279	-1,006	-1,076	-983	-821	-970	-1,016	-1,037	-1,025	-901	-962
Current account balance	226	862	214	331	608	1,061	460	486	269	172	54	787
					(Actual data, not seasonally adjusted)							
Current account balance	170	857	607	569	-62	1,145	711	411	137	129	130	915
Long-term capital, net	217	-17	-351	-53	-413	181	-102	-13	-113	-295	-65	7
Private sector	98	-46	-318	-271	-187	-238	-454	-309	17	-88	141	235
Public sector	119	29	-33	218	-226	419	353	296	-130	-207	-207	-228
Short-term capital, net	371	-659	422	-779	1,165	-1,890	98	-592	-240	-887	-1,106	-538
Private sector 2/	369	-670	469	-706	1,182	-1,876	122	-605	-233	-891	-1,107	-535
Public sector	3	11	-47	-74	-17	-14	-24	13	-7	4	2	-3
Total capital movements	589	-676	72	-832	752	-1,710	-4	-605	-352	-1,182	-1,171	-531
Change in net reserves (on a transactions basis) 3/	758	181	679	-263	690	-565	707	-194	-215	-1,053	-1,041	383
Change in liabilities related to reserves 4/	-596	13	-83	215	-262	701	-15	364	229	580	350	-490
SDR allocations and valuation adjustments	64	-100	-36	41	-107	-65	-69	-85	235	38	152	324
Change in gross reserves	227	94	559	-6	320	70	623	85	248	-434	-539	217

Source: South African Reserve Bank, Quarterly Bulletin; and staff calculations.

1/ Net foreign sales of gold plus changes in the gold holdings of the Reserve Bank and other banking institutions.
2/ Including unrecorded transactions.
3/ Gold and foreign exchange reserves of the Reserve Bank, the banking sector, and the Central Government.
4/ Liabilities related to reserves include all foreign short-term liabilities of the Reserve Bank and the other banking institutions and short-term foreign loans to the Central Government by foreign banks and authorities.

Table 25.   South Africa: Quarterly Balance of Payments, 1990-93

(In millions of rand)

	1990 III	1990 IV	1991 I	1991 II	1991 III	1991 IV	1992 I	1992 II	1992 III	1992 IV	1993 I	1993 II
					(Seasonally adjusted figures)							
Nongold exports, f.o.b.	10,539	11,553	10,321	10,969	11,808	11,611	11,884	12,388	12,375	12,362	11,812	14,050
Net gold exports 1/	4,492	4,582	4,342	5,061	4,929	5,255	4,537	4,182	5,092	4,545	5,264	5,548
Imports, f.o.b.	11,348	10,711	11,512	12,091	12,182	11,600	12,381	12,296	13,846	13,360	14,095	14,013
Trade Balance	3,682	5,424	3,151	3,939	4,556	5,265	4,041	4,274	3,622	3,546	2,981	5,584
Net services and transfers	-3,097	-3,241	-2,599	-3,012	-2,814	-2,298	-2,740	-2,891	-2,875	-3,037	-2,812	-3,072
Current account balance	586	2,184	552	927	1,741	2,967	1,301	1,383	746	509	168	2,513
					(Actual data, not seasonally adjusted)							
Current account balance	440	2,171	1,568	1,594	-178	3,203	2,008	1,170	379	383	406	2,920
Long-term capital, net	563	-44	-906	-147	-1,182	505	-287	-37	-312	-875	-204	21
Private sector	254	-117	-822	-758	-534	-667	-1,283	-880	48	-261	441	750
Public sector	309	73	-84	611	-648	1,172	996	843	-360	-614	-645	-729
Short-term capital, net	962	-1,669	1,091	-2,182	3,335	-5,289	276	-1,684	-664	-2,629	-3,452	-1,717
Private sector 2/	955	-1,698	1,212	-1,976	3,384	-5,249	345	-1,720	-645	-2,642	-3,458	-1,709
Public sector	7	29	-121	-206	-49	-40	-69	36	-19	13	6	-8
Total capital movements	1,525	-1,713	185	-2,329	2,153	-4,784	-11	-1,721	-976	-3,504	-3,656	-1,696
Change in net reserves (on a transactions basis) 3/	1,965	458	1,753	-735	1,975	-1,581	1,997	-551	-597	-3,121	-3,250	1,224
Change in liabilities related to reserves 4/	-1,544	32	-215	603	-751	1,960	-43	1,036	634	1,720	1,092	-1,565
SDR allocations and valuation adjustments	166	-253	-93	114	-307	-182	-195	-242	650	113	476	1,033
Change in gross reserves	587	237	1,445	-18	917	197	1,759	243	687	-1,288	-1,682	692

Source: South African Reserve Bank, Quarterly Bulletin.

1/   Net foreign sales of gold plus changes in the gold holdings of the Reserve Bank and other banking institutions.
2/   Including unrecorded transactions.
3/   Gold and foreign exchange reserves of the Reserve Bank, the banking sector, and the Central Government.
4/   Liabilities related to reserves include all foreign short-term liabilities of the Reserve Bank and the other banking institutions and short-term foreign loans to the Central Government by foreign banks and authorities.

Table 26. South Africa: Volume and Unit Value of Exports and Imports, 1987-93

(Percentage change from previous period)

	1987	1988	1989	1990	1991	1992	1992 1/ I	II	III	IV	1993 1/ I	II	III
Volume of exports													
Goods and nonfactor services	-1.9	9.9	4.5	1.9	0.3	1.0	-1.9	--	6.8	-4.1	-3.6	9.8	-2.4
Nongold goods and nonfactor services	-1.0	13.5	9.3	3.1	-0.4	2.9	0.9	1.0	1.6	0.4	-7.7	15.0	-6.7
Volume of imports													
Goods and nonfactor services	3.6	21.9	-0.2	-5.8	2.2	5.4	6.6	-1.1	6.9	-1.2	1.5	-2.9	1.8
Unit value of exports 2/													
Goods and nonfactor services	9.2	8.1	9.1	5.2	4.6	4.3	-0.4	1.3	-2.9	1.0	4.3	4.9	2.6
Nongold goods and nonfactor services	8.2	9.0	12.5	8.7	4.4	6.2	1.1	3.0	-2.8	-0.9	3.9	3.2	3.6
Unit value of imports 2/													
Goods and nonfactor services	4.8	9.7	14.0	7.3	6.4	5.4	--	3.4	2.0	-1.0	2.2	4.7	4.0
Terms of trade 3/													
Including gold													
Index 1985 = 100	106.5	105.0	100.6	98.5	96.9	95.8	99.2	97.2	92.5	94.4	96.4	95.9	94.5
Percentage change	4.0	-1.4	-4.2	-2.1	-1.6	-1.1	-0.4	-2.0	-4.8	2.1	2.1	-0.5	-1.5
Excluding gold													
Index 1985 = 100	105.7	105.0	103.6	105.0	103.0	103.8	106.6	106.2	101.2	101.2	103.0	101.4	100.9
Percentage change	3.0	-0.7	-1.3	1.4	-1.9	0.8	1.0	-0.4	-4.7	--	1.8	-1.6	-0.5
Memorandum items:													
Effective exchange rate (IFS)													
Nominal	-0.8	-13.8	-8.8	-5.6	-6.2	-6.0	-1.2	-0.8	-2.9	-0.7	-1.7	-5.8	...
Real 4/	12.8	-5.5	0.4	3.0	3.8	3.8	1.4	1.2	-0.5	-0.0	-0.4	-2.7	...
Trading partners													
Total domestic demand	3.8	4.8	3.7	2.5	0.6	1.0	...	...	...	...	...	...	...
Non-oil import demand	9.6	10.3	7.3	5.4	4.3	5.1	...	...	...	...	...	...	...
Domestic demand (incl. exports) 5/	2.4	7.5	1.8	-1.6	0.1	-0.6	0.9	-0.8	0.3	-1.1	0.6	0.3	...

Sources: South African Reserve Bank, Quarterly Bulletin; International Monetary Fund, International Financial Statistics; and staff estimates.

1/ Seasonally adjusted quarterly data, except for memorandum items.
2/ In rand.
3/ Goods and nonfactor services.
4/ Relative consumer prices adjusted for exchange rate changes (depreciation -); period average.
5/ Seasonally adjusted at annual rate.

Table 27.   South Africa: Services and Transfers, 1987-92

(In millions of dollars)

	1987	1988	1989	1990	1991	1992
Services						
Receipts	3,908	3,909	4,402	4,385	4,486	4,668
Freight	207	255	349	295	246	364
Other transportation	622	656	781	926	962	1,024
Travel	599	691	811	956	1,103	1,182
Investment income	1,327	1,214	1,132	549	775	838
Interest	252	221	243	132	165	147
Dividends and profits	924	857	759	352	518	598
Taxes	151	136	129	65	92	94
Other income 1/	1,152	1,094	1,329	1,658	1,400	1,259
Payments	7,875	7,925	8,214	9,163	8,444	8,821
Freight	1,036	1,096	1,015	1,016	1,059	1,205
Other transportation	588	623	860	1,103	1,097	1,094
Travel	869	1,005	895	1,118	1,155	1,545
Investment income	3,475	3,403	3,526	3,810	3,281	3,136
Interest	2,008	2,140	2,245	2,463	2,078	1,890
Dividends and profits	1,256	1,085	1,112	1,179	1,084	1,148
Taxes	211	179	168	167	120	98
Other payments 2/	1,906	1,798	1,918	2,117	1,851	1,840
Net	-3,968	-4,016	-3,812	-4,778	-3,957	-4,153
Freight	-829	-841	-667	-720	-813	-841
Other transportation	34	33	-79	-176	-134	-69
Travel	-270	-315	-84	-162	-53	-363
Investment income	-2,148	-2,190	-2,394	-3,261	-2,506	-2,298
Interest	-1,756	-1,919	-2,002	-2,331	-1,913	-1,743
Dividends and profit	-333	-228	-353	-827	-565	-551
Taxes	-60	-43	-39	-103	-28	-4
Other	-755	-704	-589	-459	-451	-581
Net transfers	-19	40	78	71	73	105
Private	11	7	41	-33	-27	32
Central Government	-30	33	37	104	100	73
Net invisibles	-3,987	-3,976	-3,734	-4,707	-3,884	-4,048
(In percent of GDP)	(-4.9)	(-4.6)	(-4.2)	(-4.6)	(-3.6)	(-3.5)

Source: South African Reserve Bank, Quarterly Bulletin; and staff calculations.

1/ Income from non-merchandise insurance and other foreign earnings.
2/ Payments for non-merchandise insurance and other foreign payments.

Table 28. South Africa: Net Capital Movements, 1987-92

(In millions of dollars)

	1987	1988	1989	1990	1991	1992
Long-term capital	-836	-516	-231	-39	-627	-530
Public sector	140	-473	-179	197	381	303
General government	-49	-95	-4	538	422	200
Public corporations	401	-280	-111	-151	97	189
Public enterprises	-212	-98	-64	-189	-139	-86
Nonbank private sector	-1,020	-70	-6	-251	-962	-566
Direct investment, net	-158	1	7	29	-194	-466
Nondirect investment, excluding net purchases of securities	-185	-65	-18	356	75	-247
Net purchases of securities by nonresidents	-676	-7	5	-636	-843	147
Banking sector	44	28	-47	14	-45	-267
Short-term capital	-301	-1,651	-1,292	-787	-285	-476
Public sector	-16	-11	-236	17	-151	-14
General government	--	--	-26	90	-29	-1
Public corporations	-20	15	-80	4	-32	-12
Public enterprises	4	-26	-130	-78	-90	-1
Nonbank private sector	-285	-1,641	-1,055	-804	-134	-462
Direct investment	-142	92	-382	-148	198	-462
Nondirect investment	-143	-1,733	-673	-656	-333	--
Errors and omissions	-614	-852	-271	-105	-818	-1,173
Net capital movements	-1,751	-3,020	-1,794	-931	-1,730	-2,178

Source: South African Reserve Bank, Quarterly Bulletin; and staff calculations.

Table 29. South Africa: External Debt, 1986-92

	1986	1987	1988	1989	1990	1991	1992
	(In millions of U.S. dollars)						
Debt outstanding (at year-end)							
Medium and long term 1/	8,228	9,503	8,867	8,288	8,520	8,904	8,279
Public sector 2/	6,048	6,097	4,857	3,784	3,492	...	...
Private sector	2,180	3,406	4,010	4,504	5,028	...	...
Short term 1/	14,365	13,115	12,318	12,309	10,863	9,225	9,022
Public sector 2/	4,659	4,390	4,075	5,466	3,729	...	...
Private sector	9,706	8,725	8,243	6,843	7,134	...	...
Total external debt	22,593	22,618	21,185	20,597	19,383	18,129	17,301
Public sector	10,707	10,487	8,932	9,250	7,221	6,805	6,780
Private sector	11,886	12,131	12,253	11,347	12,162	11,324	10,521
	(In percent)						
Memorandum items:							
Total external debt (in billions of rand)	49.3	43.7	50.4	52.1	49.7	49.7	52.9
Debt/GDP	36.3	28.0	24.3	23.1	19.0	16.8	15.1
Debt/Exports of goods and nonfactor services	108.4	89.8	87.0	79.0	70.3	67.0	67.7
Share of short-term debt in total debt	63.4	58.0	58.2	59.8	56.0	50.9	52.1
Interest payments/Exports of goods and nonfactor services	10.8	8.4	8.4	8.9	9.0	7.7	6.9

Sources: South African Reserve Bank, Quarterly Bulletin; data provided by the South African authorities; and staff estimates.

1/ The distinction between short-term and long-term debt is not based on the original maturity structure, but on the schedule of repayments, i.e., short-term debt comprises all amortization payments due over the next year.

2/ Central Government, local authorities, public business enterprises, and public corporations.

Table 30. South Africa: External Reserves, 1989-93

(In millions of U.S. dollars; end of period)

	1989	1990	1991	1992	1992				1993	
					I	II	III	IV	I	II
Gross external reserves	2,722	2,834	3,574	3,670	4,022	4,259	4,441	3,670	2,999	3,070
Gross official reserves 1/	2,097	2,422	2,973	2,984	3,427	3,679	3,832	2,984	2,359	2,257
Gold, national valuation 2/	1,137	1,415	2,074	1,992	2,057	2,109	2,100	1,992	1,639	1,670
SDRs	2	2	2	--	1	1	1	--	--	6
Other foreign exchange	958	1,005	897	991	1,369	1,569	1,731	991	720	581
External liabilities	3,986	3,145	3,519	4,257	3,342	3,839	4,009	4,257	4,440	3,773
Official liabilities relating										
to reserves	551	267	16	289	--	--	--	289	667	472
Net external reserves	-1,263	-311	55	-587	680	420	432	-587	-1,442	-703
Net official reserves	1,545	2,156	2,957	2,695	3,427	3,679	3,832	2,695	1,692	1,785
Memorandum items:										
Gross official reserves										
In millions of rand	5,317	6,207	8,155	9,110	9,853	10,198	10,779	9,110	7,491	10,215
In millions of SDRs	1,595	1,703	2,078	2,170	2,498	2,571	2,602	2,170	1,688	2,187
In millions of dollars,										
excluding gold	960	1,008	899	991	1,370	1,570	1,732	991	720	590
In millions of SDRs,										
IMF definition 3/	838	851	855	954	1,234	1,336	1,411	954	706	593
Gold (millions of ounces)	3.08	4.09	6.47	6.65	6.70	6.83	6.70	6.65	5.46	4.94
In months of imports 4/										
Gross external reserves	1.6	1.6	2.0	2.1	2.4	2.2	2.1	2.0	1.7	1.3
Gross official reserves	1.2	1.4	1.7	1.7	2.0	1.9	1.8	1.6	1.3	1.7

Sources: International Monetary Fund, International Financial Statistics; and South African Reserve Bank, Quarterly Bulletin.

1/ Holdings of the Reserve Bank and Central Government.
2/ Gold reserves are valued at 90 percent of the average of the last ten London fixing prices during the month.
3/ Gold valued at SDR 35 per ounce.
4/ Imports of goods and nonfactor services.

Table 31. South Africa: Exchange Rate and Gold Price Developments, 1986-93

(Average data)

	U.S. dollar/ Rand	U.S. dollar/ Financial rand 1/		Effective exchange rate 3/		London gold price 5/	
				Nominal	Real 4/	In rand	In U.S. dollars
	Level	Level	Discount	Index 1985=100		Level	Level
1986	0.438	0.215	52.9	78.9	92.2	840.4	367.6
1987	0.491	0.321	38.1	78.3	104.1	908.8	446.6
1988	0.440	0.261	37.9	67.5	98.3	991.6	437.1
1989	0.381	0.279	28.9	61.5	98.7	998.9	381.5
1990	0.386	0.295	24.2	58.1	101.6	991.9	383.6
1991	0.362	0.315	13.5	54.5	105.5	999.5	362.2
1992	0.351	0.206	37.2	51.3	109.5	980.0	343.7
1991							
Jan.	0.390	0.300	23.6	55.6	102.0	984.5	384.1
Feb.	0.394	0.310	20.7	55.3	102.7	923.6	363.8
Mar.	0.378	0.306	16.5	55.8	104.2	962.9	363.4
Apr.	0.365	0.297	17.0	55.7	105.2	982.1	358.3
May	0.358	0.305	14.1	55.0	104.9	997.7	357.0
June	0.349	0.301	13.0	55.1	105.8	1,050.1	366.5
July	0.347	0.307	12.1	54.8	106.2	1,059.5	367.9
Aug.	0.348	0.308	11.5	54.1	105.9	1,022.5	356.4
Sep.	0.353	0.317	11.0	53.8	106.4	989.0	348.6
Oct.	0.353	0.320	9.5	53.6	107.7	1,015.5	358.8
Nov.	0.358	0.327	8.5	53.1	107.2	1,006.4	360.1
Dec.	0.361	0.315	13.5	52.5	107.3	1,000.4	361.5
1992							
Jan.	0.360	0.291	18.1	52.2	107.8	986.4	354.5
Feb.	0.355	0.263	24.9	52.5	109.2	996.9	353.9
Mar.	0.347	0.285	18.0	52.5	109.6	992.5	344.5
Apr.	0.347	0.290	16.5	52.3	110.1	974.5	338.6
May	0.351	0.291	17.6	52.0	109.9	959.6	337.1
June	0.356	0.266	26.2	51.7	110.4	957.2	340.8
July	0.363	0.259	28.5	51.1	110.4	971.1	352.6
Aug.	0.362	0.269	26.4	50.4	109.4	949.3	343.3
Sep.	0.357	0.246	30.9	50.0	108.9	966.4	345.4
Oct.	0.347	0.230	32.1	50.0	109.1	994.3	344.3
Nov.	0.334	0.210	36.3	50.4	110.2	1,003.9	335.0
Dec.	0.332	0.206	37.2	50.0	109.2	1,007.6	334.6
1993							
Jan.	0.326	0.216	33.7	49.9	109.7	1,009.9	329.0
Feb.	0.321	0.221	30.7	49.6	109.4	1,028.1	329.3
Mar.	0.315	0.220	30.1	48.5	108.1	1,049.0	330.0
Apr.	0.316	0.219	30.8	47.2	107.6	1,083.9	342.0
May	0.315	0.217	31.0	46.9	106.9	1,162.5	359.4
June	0.309	0.213	29.3	45.3	103.9	1,204.6	371.9
July	0.298	0.224	24.2	45.4	105.0	1,312.6	392.1
Aug.	0.297	0.213	28.1	45.2	105.4	1,274.2	378.9
Sep.	0.293	0.239	17.9	...	...	1,211.0	355.3
Oct.	0.295	0.236	20.8	...	...	1,233.2	364.1

Sources: South African Reserve Bank, Quarterly Bulletin; and International Monetary Fund, International Financial Statistics.

1/ End-of-period.
2/ The difference between the commercial and the financial rand as a percentage of the commercial rand.
3/ IMF estimates.
4/ Relative consumer prices, adjusted for exchange rate changes.
5/ Average daily fixing price per fine ounce

Table 32. South Africa: Selected Indicators of Competitiveness, 1985-93

(Indices: 1985 = 100)

	1985	1986	1987	1988	1989	1990	1991	1992	1993 1/
Real effective exchange									
rate (IFS)	100.0	92.2	104.0	98.2	98.6	101.5	105.4	109.4	101.9
Real effective exchange									
rate (SARB)	100.0	103.4	119.9	114.8	114.1	119.5	122.8	124.5	119.8
Terms of trade (SARB) 2/	100.0	102.6	105.7	105.0	103.6	105.0	103.0	103.8	101.8
Production of exports 2/									
Export price/Unit labor									
cost in non-agriculture	100.0	102.9	96.5	93.0	89.3	83.3	75.9	70.8	...
Export price/CPI	100.0	99.0	90.6	86.3	84.3	79.4	70.8	64.6	62.6
Export price/PPI	100.0	99.7	94.7	91.2	89.0	86.4	81.0	79.5	79.6
Export price/Domestic									
components of PPI	100.0	100.4	94.3	90.3	88.5	85.6	79.7	77.5	77.5
Export price/Import									
components of PPI	100.0	97.2	95.8	94.1	91.0	89.9	86.6	88.3	89.3
Production of import substitutes									
PPI (manufactures)/Import									
components of PPI	100.0	97.0	101.8	104.7	105.0	107.2	110.8	114.9	117.4
PPI (manufactures)/Unit									
labor cost (manufactures)	100.0	103.0	103.9	105.4	104.3	100.2	98.2	91.6	...
PPI (domestic goods)/Import									
components of PPI	100.0	96.8	101.6	104.2	102.8	105.0	108.7	113.9	115.2
PPI (domestic goods)/Unit									
labor cost (nonagriculture)	100.0	102.6	102.4	103.1	100.9	97.3	95.3	91.3	..
Consumption substitution									
CPI (goods)/Import price	100.0	103.4	116.6	121.7	122.9	132.2	145.5	160.5	162.6
Memorandum items:									
Labor share in nonagriculture	100.0	99.8	101.8	100.7	102.1	103.5	103.8	105.3	...
Labor share in manufactures	100.0	97.1	96.2	94.8	95.9	99.8	101.8	109.2	...

Sources : South African Reserve Bank (SARB) Quarterly Bulletin: and International Monetary Fund. International Financial Statistics (IFS).

1/ SARB data on real exchange rate and data on producer prices through August. Rest of data through September.

2/ Export price excludes gold.