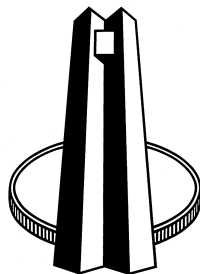


The saving behaviour of the South African economy

by J W Prinsloo

Occasional Paper No 14

November 2000



South African Reserve Bank

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1. Introduction

A general definition of saving in a country would be the amount of resources or income produced in the economy in a given year, that is not consumed immediately but is put to use in a way that will provide returns to the economy in years to come. Consequently, a relatively moderate level of domestic saving could limit the country's rate of investment, restrain the rate of economic growth and make the country much more vulnerable than it would otherwise be to international capital shifts of the type that have been experienced by several countries during the 1990s.

Somewhat paradoxically, certain countries' high saving rates not only help to explain these countries' noteworthy economic growth and development but also shed light on the equally remarkable recent financial and economic breakdown in these countries. The fact that some of these economies recorded large current-account deficits financed by foreign capital inflows despite their high saving rates, posed serious questions about the quality of their investments. In retrospect, it seems that a substantial portion of the investments has been wasted on speculative activities, especially in real-estate, as well as on unprofitable industrial projects, implying that the quantity of capital formation was high, but in most cases the quality of investment was low.

In the long run the level of gross national income depends on the capacity of an economy to produce. Experience around the world shows that countries with high rates of capital formation grow more rapidly and that a high level of domestic saving is necessary for more rapid growth in the capital stock. Although international capital flows can supplement domestic saving, the volatile character of the global capital market curtails the availability of sustained cross-border capital inflows. In most cases, only countries with a high saving rate can maintain a high investment rate.

The question whether economic developments in South Africa have in recent years been conducive to growth, focuses directly on the rate of investment and therefore on saving. Most of the recent studies on strategic guidelines for achieving an adequate rate of economic growth and development, indicate that the aggregate saving rate will have to be raised above 20 per cent of gross domestic product to support a sustained growth rate in real incomes of more than 3 per cent per year. By contrast, during the period from 1990 to 1999, the total saving rate had declined to an average of only 16,3 per cent of gross domestic product.

An international study on countries' competitiveness suggests that ranking countries according to their saving rates is useful when predicting their likely ranking in terms of growth over the next decade. Based on empirical evidence, the study argues:

"There is no case on record of a country consistently achieving a top growth rate without also logging one of the highest rates of investment. Less appreciated is that high investment must be financed by high savings. Drawing on foreign savings, as reflected in current-account deficits, is becoming easier in our integrated world. Yet this source of finance remains small relative to the amount of investment required for better-than-average economic growth. Though investment rates of well over 30 per cent of gross domestic product are found in the star performers, few countries have

The author is grateful to Mr H Smith and Miss M E van Deventer of the National Accounts Division of the Research Department of the South African Reserve Bank for their valuable assistance with the statistical analysis used in this study.

The views expressed are those of the author and do not necessarily reflect the views of the South African Reserve Bank.

been able to sustain current-account deficits much above 3 per cent of gross domestic product. Most investment must be funded domestically and, to obtain top growth rates, domestic saving must generally exceed 30 per cent as well" (UBS, 1996: 3).

It is not possible to generalise these statements to every country, but it is important that South Africans at the different institutional levels should realise the need to accumulate additional assets to ensure not only that they can handle temporary downturns in economic activity, but also that they will have the wherewithal to enjoy a sustained high level of economic growth later on. However, although savings are important for a country's long-term growth and prosperity, investing these savings efficiently matters just as much as the level of total saving.

This analysis aims at presenting an overview of the importance of saving in the national economy, while the definition and measurement of saving in the national accounts are summarised in the subsequent section. This is followed by an analysis of the trends in aggregate saving in South Africa since 1960, with special attention to the more recent deterioration in total saving. Although the analysis outlines the trends in saving by the institutional sectors, it focuses primarily on the factors that can influence private-sector saving and the interdependence of sectoral saving that could have played a role in the evolution of the household sector's saving. The likely outcome of measures to strengthen the national saving rate is discussed briefly in the subsequent section, before a summary and some concluding remarks are made.

2. The importance of saving in the national economy

As mentioned in the introduction, saving provides the wherewithal for capital formation which, in turn, is essential for economic development. Investment is widely accepted as a goal of economic policy because it allows producers to take advantage of technological progress, increases the productivity of workers and consequently real wages, and thereby allows for the permanent improvement of the standard of living of the population.

In a closed economy with no foreign trade, investment would equal savings. In an open economy that trades with other countries, there may be an imbalance between domestic saving and domestic investment. The difference between domestic saving and investment is then reflected in the surplus or deficit on the current account of the balance of payments. See Annexure 1 for a description of the link between the national accounts and the balance of payments. When domestic investment exceeds domestic saving, the shortfall shows in a deficit on the current account of the balance of payments, which must be financed by importing saving from other parts of the world – i.e. by means of an inflow of capital from abroad – or by depleting the country's stock of international reserves. This indicates that a part of the adjustment to an imbalance between saving and investment may be in the form of changes in the exchange rate.

In many countries around the world, experience has shown that pursuing a cheap money policy with credit abundantly available at low cost will end in a spiral of successive depreciations of the currency and escalating inflation. A sufficiently strong saving performance is therefore an important precondition for macroeconomic balance and the maintenance of financial and price stability.

In the public debate on appropriate economic policies for South Africa, it is often argued that additional investment, and therefore saving too, is needed to foster

long-term economic growth. Some participants in this debate apparently believe that an increase in the saving rate provides a means to accelerate the rate of output growth *permanently*. In reality, however, an increase in the share of domestic income devoted to saving and investment does not necessarily affect the growth rate indefinitely if it is not accompanied by changes in the production structure or by technological progress, resulting in improved techniques or organisation of production and subsequently in greater productivity.

A higher saving and investment level can nevertheless raise the *level* of output per worker, and during the transition from a lower investment level to a higher one it would also raise the growth rate temporarily. It should also be taken into account that the portion of domestic income allocated to saving, cannot be increased indefinitely. The saving ratio of a community is determined by the optimising decisions of many individual households, which ensure that a major portion of current income will always be consumed.

Towards the end of the 1970s, the need for higher global savings rates was viewed in a serious light when real income growth slowed down in virtually all the rich countries of the world. Then the greater propensity to spend was no longer seen as the start of a virtuous multiplier process of increasing aggregate demand. On the contrary, it was viewed as a structural deficiency which prevented economies from increasing their capacities to produce. The saving shortfall in the rich countries since the late 1970s was aggravated firstly by the financing needs of Third World countries and secondly, after 1989, by the economic restructuring of formerly communist countries in Eastern Europe and the former Soviet Union. It was feared that real interest rates would be pushed higher by these global financing requirements and that this might suppress real fixed investment. In this manner, lower global saving would mean lower investment and slower real income growth throughout the world.

3. Definitions and measurement of saving in the national accounts

3.1 Defining domestic saving

Gross saving in the national accounts represents that portion of total income generated during a certain period, which is not consumed during that period. Consequently, saving is retained income resulting from the postponement of consumption. It is measured as a balancing item in the current income and outlay accounts of the domestic institutional sectors, i.e. private households, companies and the general government. In the integrated economic accounts according to the 1993 SNA, saving for the institutional sectors is derived as a balancing item in the "use of disposable income account".

Capital gains and losses as well as profits or losses made from the revaluation of financial or fixed assets, are excluded from saving in the national accounts. Net saving is equal to gross saving less provision for the consumption of fixed capital. Net saving comprises net public-sector and private-sector saving. Private saving, in turn, consists of personal and corporate saving.

3.2 Personal saving

Saving by the household sector is defined as that part of current income, after the payment of direct taxes, that is not consumed or transferred as part of household

current consumption. Likewise, saving includes current disbursements made in the form of a reduction in household liabilities, such as repayment of capital on loans for housing and consumer durables. By contrast, any portion of the current expenditure of households not financed by current income but rather by the use of credit, represents an increase in the financial liabilities of individuals and is treated as negative saving. In addition, personal saving includes regular and recurring employer and employee contributions to pension and insurance funds and the interest earned on those funds. Saving is also defined in terms of flows in the current account and excludes any capital gains and losses that might occur during the reference period. Although saving is not directly affected by the receipt or consumption of income in kind, the level of saving achieved by households may be indirectly affected by the receipt of income in kind which may obviate the need to purchase consumption items out of cash income.

Saving by the household sector includes the retained income of unincorporated business enterprises and the retained income of non-profit institutions serving households.

Saving by the household sector, or personal saving, is usually divided into two categories, namely contractual and discretionary saving. Contractual saving involves individuals committing themselves to a series of payments such as premiums on insurance policies, contributions to pension funds and the capital amount payable on households' mortgage loans. Discretionary saving, by contrast, refers to types of saving where households are not bound by any fixed commitments. All contractual saving normally stems from discretionary saving to the extent that contractual obligations are made on a voluntary basis. An exception is where the employee is bound by a contract of service to contribute to a pension fund.

The national-accounts estimates of personal saving do not distinguish between contractual and discretionary saving, but tentative estimates of contractual saving are often prepared from the consolidated income statements of pension funds and long-term insurers. Although differentiation between contractual and discretionary saving is not important from a macroeconomic point of view, increases in contractual-type saving accompanied by a corresponding increase in the financial liabilities of the household sector will leave total personal saving unchanged. It will only cause a rearrangement in the saving portfolio of the household sector.

3.3 Corporate saving

Saving in the corporate sector is the balancing item between the income and expenditure accounts after the current receipts and payments of companies have been taken fully into consideration. It could also be described as the retained income of private and public incorporated financial and non-financial enterprises.

Corporate saving is estimated as the sum of the gross operating surpluses of companies, less the net dividend, interest, rent and royalties payable by them to the other sectors of the economy and to the rest of the world, less direct taxes on income and wealth and other net transfer payments made to the general government, the household sector and the rest of the world. Corporate saving calculated according to these guidelines represents gross corporate saving. Net corporate saving comprises gross corporate saving after providing for the consumption of fixed capital and inventory valuation adjustment. The latter is the difference between the

change in the book value of inventories and the physical change in inventories valued at the average prices prevailing during the period of change. This difference is a measure of the net gain or loss realised on inventories by businesses as a result of price changes. Gains and losses on inventory holdings form part of corporate profits before taxes, and must be excluded in order to measure current production and actual saving by the corporate sector.

3.4 Saving by general government

Saving by general government is the total of the retained profits of public enterprises and retained taxes and other current receipts not disbursed on current outlays by government. In contrast to households whose income consists mainly of factor income, the income of the general government consists of current transfers received from the private sector in the form of tax revenue and all current non-tax revenue. Tax revenue embraces all current taxes on income and wealth and taxes on production and imports (formerly direct and indirect taxes), and non-tax revenue includes income from property, the cash operating surpluses of departmental enterprises, and some other current receipts such as fines and forfeitures.

On the expenditure side, current government expenditure includes all current outlays for goods and services by general government, covering the wages and salaries of government employees and outlays on other non-capital goods and services. This component also includes some defence expenditure and an imputed expense for the capital consumption of fixed assets by general government. The remaining part of current expenditure by general government consists of interest payments on public debt, including the discount on issues of government stock, subsidies and other transfers to the household sector and the rest of the world.

3.5 Provision for consumption of fixed capital

Gross domestic saving includes provision for depreciation, or capital consumption allowances. In national accounting terms, the consumption of fixed capital can be defined as that part of the gross value of production which is required to replace fixed capital consumed in the process of production. This flow is based on the expected economic life of the individual asset and covers the loss in value due to foreseen ageing and normal wear and tear.

Estimates of consumption of fixed capital allowances in the national accounting tables are calculated from capital-formation totals at constant prices and then converted to replacement values in order to make an assessment of the use of capital assets at prices prevailing in the year that the consumption of capital actually takes place. These estimates may differ substantially from the depreciation charges provided for tax purposes in the accounts of private-sector companies.

4. Recent developments in gross saving

4.1 Changes in aggregate domestic saving

The recorded development of the saving behaviour of the South African economy dates back to the late 1940s. As a result of the enforced curtailment of consumption and outlays on capital formation for non-war purposes during World War II, the war ended with a substantial backlog of demand for consumer goods. The pent-up demand was especially strong for imported durable consumer goods and depleted

industrial and commercial inventories. In addition, there was an unprecedented range of investment opportunities in the mining sector, building construction, manufacturing, transportation, electricity and communication facilities and agricultural development. These developments led to a sharp increase in the real outlays by South African residents on consumption and capital equipment. The influence of these expansionary forces was predominant up to the end of 1948 and contributed to a steady deterioration in private saving and South Africa's balance of payments position.

Towards the end of 1948 the authorities decided to address these problems by introducing measures such as import control, which curbed the expansion of outlays on consumer goods and at the same time raised personal saving. The higher level of personal saving, in turn, offset the effects of the decline in the availability of foreign saving between 1949 and 1950. Gross saving as a percentage of gross domestic product rose from a low of 8 per cent in 1947 to about 19 per cent in 1950. The net result of these developments was that the high level of fixed capital formation of more than 20 per cent of gross domestic product could be maintained, despite the paucity of foreign funds.

The information provided in Table 1 and Graph 1 indicates that gross saving in South Africa averaged 22,4 per cent of gross domestic product in the period from 1960 to 1999. However, over the past decade a distinctly downward trend became discernible in the aggregate saving rate. As a result, the average saving rate in the period 1985-1999 fell to 18,5 per cent, compared with 23,5 per cent in 1960-1972 and 25,4 per cent in 1973-1978. During the period 1979-1984 the saving rate was at a higher average level of 26,7 per cent, but saving behaviour was strongly influenced by the windfall profits of gold-mining companies when the price of gold reached exceptionally high levels during this period. By contrast, the national saving performance during the 1990s deteriorated substantially to the low average of 16,3 per cent.

Graph 1 Gross saving as percentage of gross domestic product

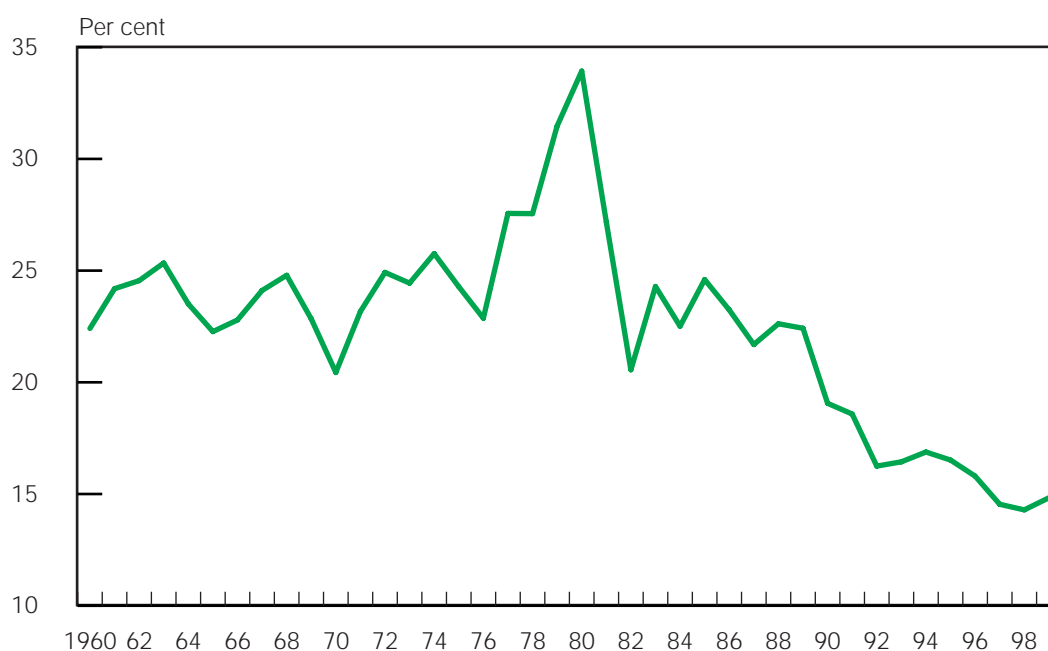


Table 1 Components of gross saving as percentage of gross domestic product

Year	Household sector	Corporate sector	Total private sector	General government	Total gross saving
1960	6,9	9,2	16,1	6,3	22,4
1961	10,6	8,5	19,1	5,1	24,2
1962	12,4	8,7	21,1	3,5	24,6
1963	10,2	8,5	18,7	6,7	25,3
1964	7,3	9,9	17,2	6,3	23,5
1965	7,5	9,2	16,7	5,6	22,3
1966	8,9	9,1	18,0	4,8	22,8
1967	8,9	8,2	17,1	7,0	24,1
1968	9,9	8,4	18,2	6,5	24,8
1969	7,4	9,0	16,4	6,4	22,8
1970	6,6	8,1	14,7	5,7	20,4
1971	10,6	8,4	19,0	4,2	23,2
1972	10,9	9,3	20,1	4,8	24,9
1973	6,3	10,8	17,1	7,4	24,5
1974	7,3	11,1	18,3	7,4	25,8
1975	8,0	10,9	18,9	5,4	24,3
1976	6,4	12,7	19,1	3,8	22,9
1977	10,6	13,3	23,8	3,7	27,6
1978	8,0	15,0	23,0	4,5	27,6
1979	9,9	17,7	27,6	3,9	31,5
1980	9,1	19,1	28,2	5,7	33,9
1981	4,6	17,9	22,5	4,7	27,2
1982	4,5	13,6	18,0	2,5	20,6
1983	4,1	17,8	21,9	2,4	24,3
1984	6,3	15,2	21,6	1,0	22,5
1985	8,0	15,4	23,4	1,2	24,6
1986	6,4	16,2	22,6	0,7	23,2
1987	6,8	15,3	22,1	-0,4	21,7
1988	6,8	14,9	21,7	0,9	22,6
1989	6,6	15,0	21,5	0,9	22,4
1990	4,8	13,8	18,6	0,5	19,1
1991	4,7	14,1	18,8	-0,3	18,6
1992	6,5	14,9	21,4	-5,2	16,2
1993	5,3	15,8	21,1	-4,7	16,4
1994	4,2	16,5	20,8	-3,9	16,9
1995	3,6	15,2	18,8	-2,3	16,5
1996	3,5	15,4	18,8	-3,0	15,8
1997	3,4	13,9	17,4	-2,8	14,5
1998	3,0	12,9	15,9	-1,6	14,3
1999	2,9	12,6	15,5	-0,7	14,8
Averages					
1960-72	9,1	8,8	17,9	5,6	23,5
1973-78	7,8	12,3	20,0	5,4	25,4
1979-84	6,4	16,9	23,3	3,4	26,7
1985-99	5,1	14,8	19,9	-1,4	18,5
1960-99	7,0	12,8	19,8	2,6	22,4
1990-99	4,2	14,5	18,7	-2,4	16,3

In Table 2 South Africa's saving rate is compared with that of a number of developed industrial economies. Until the mid-1980s South Africa's saving relative to gross domestic product compared favourably with those of the other countries included in the table. In fact, South Africa's ranking among the eleven countries improved from eighth in the years from 1961 to 1972 to third in the period from 1973 to 1984. In recent years, however, South Africa's saving ratio has again been surpassed by all but one of the other countries.

Table 2 Gross saving of selected countries as percentage of gross domestic product

Period	Australia	Canada	France	Japan	United Kingdom	Austria	Germany	United States	Portugal	Switzer-land	South Africa
1961-72	24,5	22,5	25,7	35,3	19,3	27,9	26,5	16,2	26,1	30,3	23,6
1973-78	22,7	22,9	25,4	33,6	19,2	25,6	21,8	16,8	23,0	25,3	25,4
1979-84	20,9	21,2	21,1	30,3	18,1	23,1	23,3	16,5	24,1	27,1	26,7
1985-89	20,1	18,7	20,2	29,4	17,0	24,1	22,4	12,8	27,1	31,7	22,9
1990-94	17,7	15,3	19,7	30,9	15,2	23,7	23,4	12,8	25,4	29,5	17,4
1995-98	18,8	17,7	20,5	28,5	17,3	23,3	22,2	14,5	25,3	29,3	15,3

Source: IMF, *International Financial Statistics* (various issues)

South Africa's average saving rate in 1980 actually exceeded the average saving rate of other middle-income economies, i.e. economies with an average income per capita of between US\$2 000 and US\$3 000 per annum. The average saving rate of these middle-income economies, at 27 per cent, was about nine percentage points lower than that of South Africa. In addition, for 1980, South Africa was ranked among the top of the eleven developing countries listed in Table 3. During the 1990s, however, South Africa's saving rate deteriorated while the saving rates of the other developing economies improved.

Table 3 Gross saving of developing and middle-income economies as percentage of gross domestic product

Country	1980	1996	1997
Argentina	24	18	18
Botswana	36	43	45
Brazil	21	18	19
Chile	17	26	25
Hungary	29	26	27
Iran	26	34	34
Malaysia	33	42	44
Mauritius	10	22	24
Mexico	25	23	26
South Africa	36	18	17
Turkey	11	18	19
Middle-income economies ..	27	22	26

Source: *World development indicators*, 1998 and 1999, The World Bank

The rather abrupt weakening of South Africa's saving rate towards the middle of the 1980s coincided with a reversal of net capital movements into the country. Until 1984 the imbalances between domestic saving and investment were generally countered

by an inflow of saving from the rest of the world. There were times, such as the years from 1960-1963 and 1977-1980, when the country experienced a net outflow of capital, but these outflows were relatively short-lived and were soon followed by renewed inflows of capital. Since 1985 when the decline in the aggregate saving rate began, it has been accompanied by a series of annual outflows of capital. As a percentage of gross domestic product, these outflows averaged 2,4 per cent between 1985 and 1993. In earlier years South Africa had experienced an inflow of capital from the rest of the world, averaging about 1,4 per cent of gross domestic product from 1960 to 1984. After the transition to a new political dispensation there was once again an inflow of capital which amounted to an average of 1,0 per cent of gross domestic product for the period from 1994 to 1999. However, the inflows of international capital since 1994 have largely been of the portfolio kind, which is known to be subject to sudden flow reversals.

Table 4 Gross saving and net capital inflows from abroad as percentage of gross domestic product

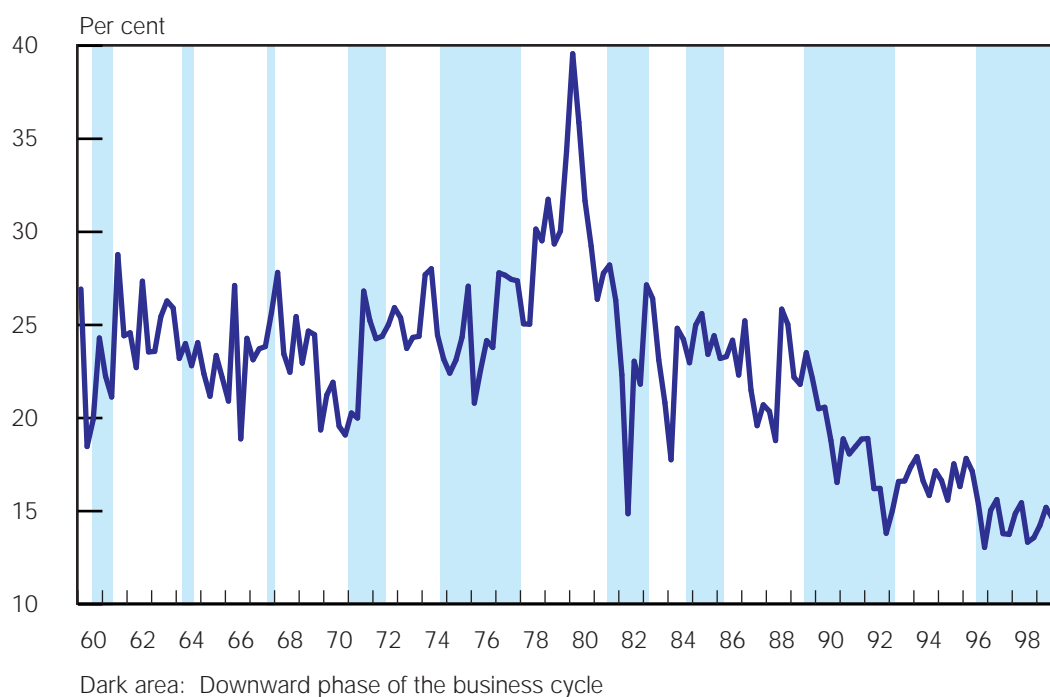
Period	Gross saving	Net inflow of capital not related to reserves
1961-72	23,6	1,9
1973-78	25,4	1,6
1979-84	26,7	0,7
1985-99	18,5	-0,6
1960-99	22,4	0,7
1990-99	16,3	0,7

Graph 2 gives the quarterly movements in the ratio of aggregate gross saving along with the successive upswings and downswings in the South African business cycle. The general trend is for the saving rate to strengthen relative to gross domestic product when the economy is in a downward phase of the business cycle, and to weaken when economic activity is expanding. A strengthening in the private sector's propensity to save is apparently a natural response during times of relative adversity. Weaker income growth and a general lack of job security during recessionary times are likely to inspire caution and frugality in households. Then the most probable outcome would be to curtail spending growth and increase saving. Conversely, a deterioration in the saving rate can be expected during an economic upswing when consumers feel more secure and are more inclined to increase their outlay on current consumption. Furthermore, corporate saving tended to strengthen the cyclical movements in saving because it also improves relative to gross domestic product in the cyclical downswings of the economy and deteriorates in the recovery phases of the business cycle.

Notable exceptions were the upswing phases of 1971-1972 and 1978-1981, when the gold-mining industry saved some of the windfall profits from the rising price of gold and when the overall national saving rate improved. An even more striking exception to the general pattern was the continuous decline in aggregate gross saving relative to the gross domestic product over the long downswing from 1989 to 1993. This was mainly due to the sharp deterioration in the saving ratio of the general government during a period of relative stability in the private saving ratio. In the cyclical upswing that began in the middle of 1993 and the subsequent downswing, the gross saving ratio returned to its general cyclical pattern and declined during a recovery in overall economic activity.

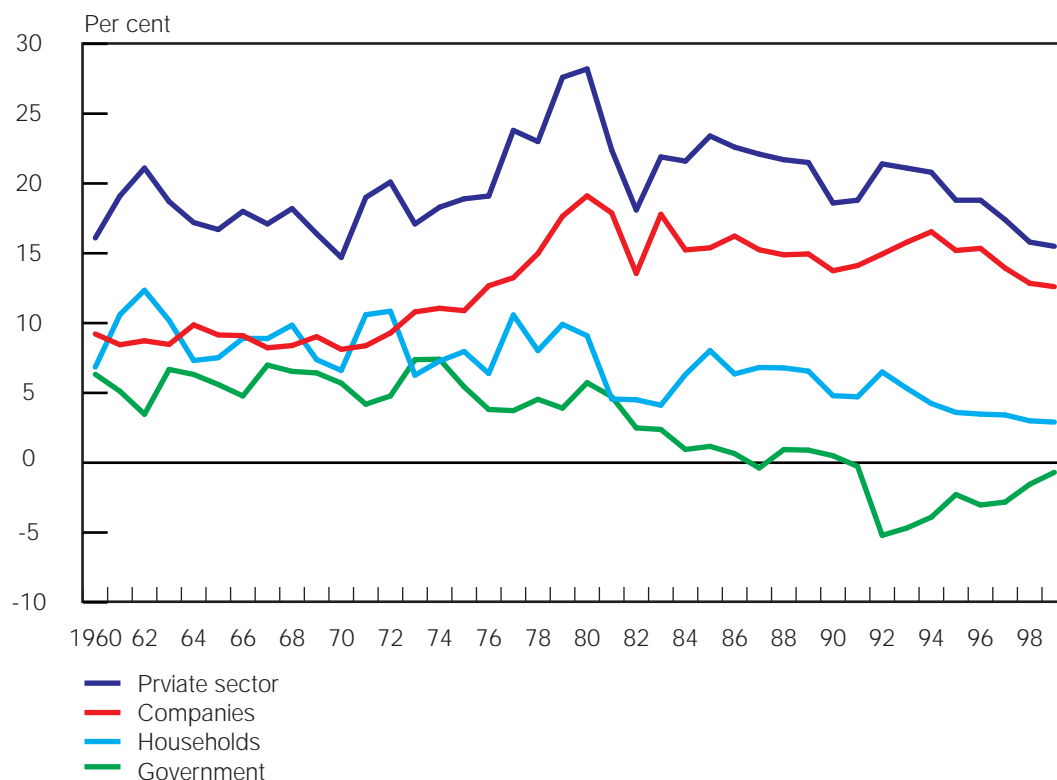
General government saving is more likely to move in the opposite direction to that of private-sector saving. During an economic downturn, government tax revenue grows more slowly or may even decline as business activity wanes. At the same time, public-sector spending may increase faster as a result of deliberate spending policies aimed at stabilising aggregate domestic demand, or because of increased spending on social security and on paying unemployment benefits. These may reduce the general government's saving during downturns in the business cycle. By contrast, the general government's saving may improve during upturns as tax revenues increase and public spending slows down relative to the growth in the gross domestic product. These opposing changes expected in government and private-sector saving make it difficult to reach any *a priori* conclusion about the cyclical behaviour of the aggregate domestic saving ratio. They also explain why the cyclical movements of the aggregate domestic saving rate in successive upswings and downswings are not fully consistent with one another.

Graph 2 Quarterly gross saving as percentage of gross domestic product



An analysis of the trends in gross saving by the institutional sectors, namely the private sector (which comprises the household and corporate sectors) and the general government (see Graph 3) shows that, relative to the gross domestic product, the average saving ratio for the private sector increased slightly between the 1960s and the 1990s. A linear growth trend over the years from 1960 to 1999 fitted to the annual private-sector ratio exhibits a slight upward trend. However, the gross saving ratio for the general government declined progressively and turned negative in the beginning of the 1990s.

Graph 3 The components of gross saving as percentage of gross domestic product



4.2 Trends in saving by general government

In the period from 1960 to 1972 and between 1973 and 1978 the gross saving ratio of the general government remained relatively stable at an average of approximately 5,5 per cent of gross domestic product. In the beginning of the 1980s this ratio declined to an average of 3,4 per cent. Since the middle of the 1980s the saving ratio of the general government has deteriorated more dramatically and in 1991 it turned negative.

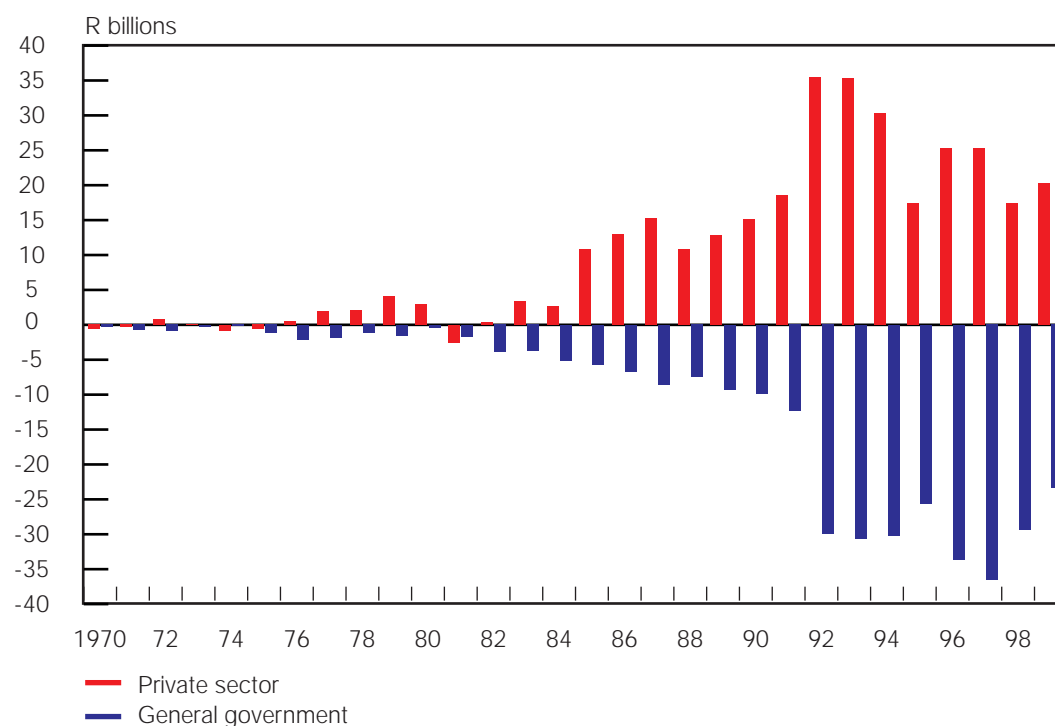
Consequently, the average saving ratio of general government for the period from 1990 to 1999 amounted to -2,6 per cent of gross domestic product, compared with the long-term average of 2,8 per cent of gross domestic product. Because of the shortfall in saving during the 1990s, the general government increasingly had to borrow funds to finance capital spending and also a portion of recurrent expenditure.

Graph 4 gives an indication of the borrowing requirement of the general government relative to the lending facilities provided by the private sector.¹ During the 1970s the total borrowing requirement of the general government was about 42,6 per cent more than the available funds provided by the corporate and household sectors. By contrast, the situation changed during the 1980s when the private sector managed to accumulate funds in excess of the borrowing requirement of the general government. The excess of funds amounted to some 24,5 per cent of the borrowing requirement of general government. This ratio declined slightly to 20,7 per cent in the early 1990s. The improvement in the ratio of resources available by the private sector compared to the borrowing requirement of the general government could mainly be attributed to relatively subdued economic growth between 1985 and 1993 and the consequent

¹ Through the calculation of net lending or net borrowing it is possible to determine the extent to which the acquisitions less disposals of non-financial assets have been financed out of saving and by capital transfers. Net lending corresponds to the amount available to a unit or sector for directly or indirectly financing other units or sectors of the economy, while net borrowing corresponds to the amount that a unit or sector is obliged to borrow from other units or sectors. This can be within the boundaries of the resident country or from abroad.

curtailment of consumption and investment spending by the private sector. In addition, the country was locked into a debt-standstill agreement with foreign creditor banks, which almost enforced a reduction in the spending behaviour of the country in order to maintain a surplus on the current account for the repayment of foreign debt. However, in the second half of the 1990s a sharp increase of 88 per cent in the borrowing requirement of the general government, compared with a moderate increase of only 11 per cent in resources made available by the private sector, again led to a shortfall in domestic resources of 34,2 per cent; a position that made the South African economy extremely vulnerable to foreign saving.

Graph 4 Net borrowing (-) or net lending (+) by the private sector and general government



The weakening in the borrowing requirement of the general government and in government saving can mainly be attributed to substantial increases in the level of general government's consumption expenditure and the escalating cost of servicing government debt. Consumption expenditure by general government, which accounted for more than 60 per cent of total recurrent expenditure by general government, rose progressively as a percentage of gross domestic product from an average of 11 per cent in the 1960s to almost 20 per cent in the 1990s. Although there is no general rule for an acceptable level of government consumption expenditure relative to gross domestic product, it is the increase in the South African ratio that rose to the upper limit compared with international experience. Furthermore, South Africa's average ratio of about 20 per cent for the 1990s is slightly higher than the global average of 16 per cent for that period. In some countries, e.g. the Netherlands, Belgium and New Zealand, a decline over time in the government consumption ratio was also accompanied by an increase in the gross saving ratio.

In total, consumption expenditure, interest payments and transfers to households rose from an average of 14,6 per cent of gross domestic product between 1960 and 1972

to 28,6 per cent for the period from 1990 to 1997 – a rise of 96 per cent. By contrast, total tax receipts increased by 50 per cent from an average ratio of 16,4 per cent of gross domestic product to 24,6 per cent over the same periods. These divergent movements are a clear reflection of the increasing gap between current income and expenditure.

4.3 Trends in saving by the corporate sector

Gross saving by the corporate sector has risen markedly since 1960. The ratio of the corporate sector's gross saving, as a percentage of gross domestic product, increased from an average of 8,8 per cent in the 1960s to 14,5 per cent in the period from 1990 to 1999. Between 1979 and 1984 the corporate sector's saving ratio rose temporarily to about 17 per cent, mainly because of the strong increase in the gross operating surplus of the gold-mining industry on account of the boom in the gold price.

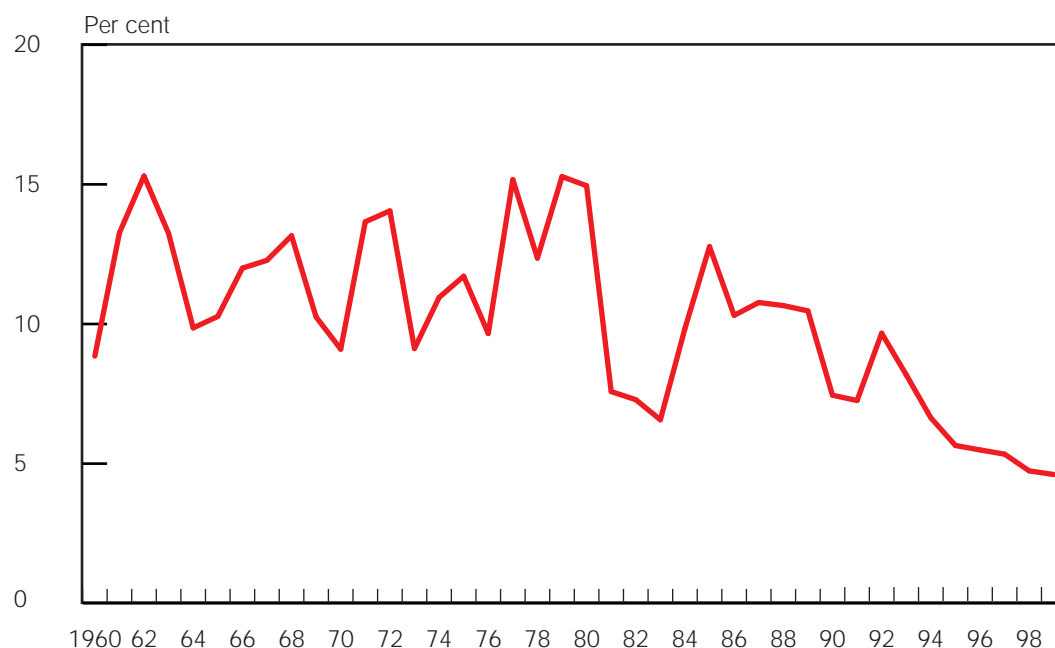
In the 1990s, and particularly during the upward phase of the business cycle between 1993 and 1996, corporate saving rose markedly. As a ratio of gross domestic product, it amounted to 16,5 per cent in 1994, after having declined to only 13,8 per cent in 1990. However, in the subsequent slowdown in economic activity, the corporate saving ratio shrunk to only 12,6 per cent by the turn of the century. Even though gross corporate saving fell back to an average of 14,5 per cent of gross domestic product during the 1990s, it is still the mainstay of gross domestic saving in South Africa. This is supported by the fact that the magnitude of gross corporate saving relative to the gross domestic product since 1978 has been greater than the combined gross saving by the household sector and the government sector (see Table 1).

4.4 Trends in saving by the household sector

Gross saving by households as a percentage of gross domestic product declined from an average of 9,1 per cent for the period between 1960 and 1972 to 4,2 per cent in the period from 1990 to 1999. The quarterly analysis of the saving behaviour by households suggests that the deterioration in the saving ratio of households has slowed down since the beginning of 1997. This was broadly consistent with a decline from 1998 in the ratio of household debt to disposable income of households and the fact that the average real after-tax return on savings turned positive during the second half of the 1990s. The decline in household saving over the past twenty years or so was part of a global weakening in households' saving performance. Personal saving ratios declined in several industrialised countries. In South Africa this has in part been related to the decline in real income growth of households – see Section 6.4, which may to some extent reflect the rise in unemployment.

Graph 5 also indicates the shift in relative importance from household saving to corporate saving. In the 1960s and 1970s households on average saved 12 per cent of their annual disposable income. This percentage dwindled to 5,2 per cent in the years from 1995 to 1999. In addition, certain specific motives and factors have emerged fairly prominently in research on the determinants that could have contributed to the steady decline in and relatively low levels of household saving in South Africa. Some of these determinants, which will be discussed in Section 6, are singled out as particularly relevant when explaining the pattern of the personal saving rate in South Africa since the 1980s.

Graph 5 Gross household saving as percentage of household disposable income



5. Determinants of saving by the corporate sector

A sectoral analysis of the performance of the corporate sector's saving shows that the relative importance of the mining sector, in terms of its percentage contribution to total gross saving by private companies, receded from the high level of 36 per cent in the second half of the 1970s to 15,5 per cent in the period 1990 to 1999. This smaller contribution was mainly due to the diminishing role that gold mines played in the South African economy. By contrast, the ratio for the manufacturing sector rose from 13,6 per cent to 37,2 per cent. This could, among other things, be associated with an appreciable increase in the profitability recorded by the manufacturing sector. Estimates indicate that profitability in the manufacturing sector rose from a low in the mid-1980s to an average between 1990 and 1999 of approximately 5 percentage points above the lower average profitability ratios recorded in the second half of the 1970s and the middle of the 1980s. In the case of the commerce sector, the contribution to total saving by the corporate sector remained virtually unchanged at an average of about 9 per cent, whereas the contribution of the financial services sector declined from an average of 31,2 per cent in the second half of the 1970s to an average of 21 per cent in the period from 1990 to 1999. During the period from 1979 to 1984 this ratio rose to 38,5 per cent.

In view of these developments, the saving behaviour of the corporate sector suggests that just as in the case of contractual saving institutions, the corporate sector also has a tendency to save on behalf of shareholders, in the sense that companies now retain a larger portion of earned profits. In this respect corporate saving has increasingly become the mainstay of the South African domestic saving effort. But corporate saving in this context should probably be viewed as an extension of, and a substitute for, saving at a personal or household level. This has been particularly evident since the 1980s when gross and net saving by the corporate sector relative to gross domestic product have exceeded the corresponding ratios recorded by households' saving.

As shareholders, individuals have ultimate claim to the undistributed profits of companies. The withholding of corporate profits causes the net worth of companies to strengthen, equity prices to rise, and the net asset values of households to increase. This kind of behaviour will be encouraged in an inflationary environment which has high personal tax rates, earns low if not negative real after-tax rates of return on depository or other fixed-interest-bearing financial investments, applies differential tax rates to companies and households, and exempts capital gains from taxation. This kind of environment has in all respects been typical of the situation in the South African economy since the early 1980s.

As the after-tax profits of the corporate sector can either be retained as corporate saving or be distributed as dividends, which increase the household sector's ability to save, a number of factors could have contributed to the relatively stable performance of corporate saving since the early 1980s.

Firstly, the prevailing tax policies may influence the decision to accumulate income in the corporate sector rather than as an individual, as well as the decision to increase corporate saving compared with the option of distributing profits as dividends. The statutory corporate tax rate, including temporary surcharges, rose on average from 30 per cent in the first half of the 1960s to a high of 50 per cent in the beginning of the 1990s, before receding to 35 per cent from the fiscal year 1994/95 and to 30 per cent from 1999/2000. Likewise, the top marginal income tax rate for individuals, including temporary surcharges and loan levies, increased from 47,5 per cent in 1960 to a high of 72 per cent in 1973, after which it was gradually reduced to 45 per cent by the tax year ending in 1994. In the Budget proposals for the year 2000/01, this rate was lowered to 42 per cent on income in excess of R200 000. However, despite these changes the differential between corporate and personal income tax rates was and probably remains a powerful incentive for people in South Africa to earn income in the corporate sector instead of as individuals.

Secondly, changes in tax arrangements could have affected the decision to distribute profits or retain them as corporate saving. From 1960 to 1990 one-third of all dividends received by individuals were tax-free and the balance was taxed at each individual's marginal rate. Consequently, dividends paid out to equity holders were effectively taxed twice: firstly through corporate tax on company profits (as dividends are paid out of profits) and secondly through a dividend tax paid by individuals. Between 1990 and 1993 all dividends received by individuals were tax-free; but recently cash dividends declared have been subject to the secondary tax on companies, which amounted to 15 per cent in the fiscal year 1993/94 and rose to 25 per cent in the fiscal year 1994/95, before being reduced to 12,5 per cent in the ensuing five fiscal years.

Thirdly, the effective tax rate of companies fluctuated around an average of 24 per cent between 1975 and 1996, but then declined from a high of 29,7 per cent in 1990 to an average of about 23,8 per cent between 1995 and 1999.

These developments and the fact that capital gains on equities are not taxed,² resulted in a significantly lower rate of overall tax payments when profits were retained in the corporate sector instead of being distributed to households. This was apparent in the slowdown of dividend growth from the corporate sector so that this sector could increase retained earnings. This trend has been particularly noticeable since the middle of the 1980s when the average ratio of dividends paid as percentage of corporate profits before tax, declined to about 36,2 per cent from approximately 45 per cent for the period prior to 1985.

² In the Budget of 2000/01 a capital gains tax, that will become effective as from 1 April 2001, was announced.

Corporate policies regarding a more conservative attitude towards retained earnings could have been influenced by the expectation then prevailing that tougher times lay ahead (as had been the case in South Africa between 1985 and 1993) and the option of using internally generated funds to finance the relatively lucrative investment opportunities which have prevailed since 1993. Furthermore, the sustained stringent monetary policy stance taken since 1989 has resulted in a slowdown in the inflation rate and an increase in the cost of borrowing. This impelled business enterprises to retain income rather than borrowing funds for expanding fixed capital formation. The net result of these developments was a noticeable benefit for saving in business enterprises, particularly in the non-financial private corporate sector. Corporate profits (gold mining excluded) and consequently saving may also have benefited from the gradual improvement in South Africa's terms of trade (excluding gold) since the beginning of the 1980s.

6. Determinants of saving by the household sector

The theoretical literature suggests a variety of motives for household saving, which can be grouped into four broad categories, namely: to smooth the availability of financial resources over time so as to maintain a more stable consumption profile; to provide resources for retirement and bequests; to finance expected and large lifetime expenditure (including residential buildings and education); and to finance unexpected losses of income (precautionary saving).

In an attempt to identify the determinants of saving behaviour, most studies rely on some variant of the life-cycle, or permanent-income, hypothesis. According to this theoretical approach, households maximise the benefits of consumption over their lifetime, subject to the constraints of expected lifetime income and initial wealth. Interest rates indicating the terms of the trade-off between current and future consumption, demographic variables and wealth are accordingly singled out as potential causes of changes in consumer behaviour. Other determinants that may influence households' decisions about saving include changes in average income levels, the distribution of income among households, government saving, corporate saving and the ability of individuals to "pierce the corporate veil", unemployment and financial deregulation.

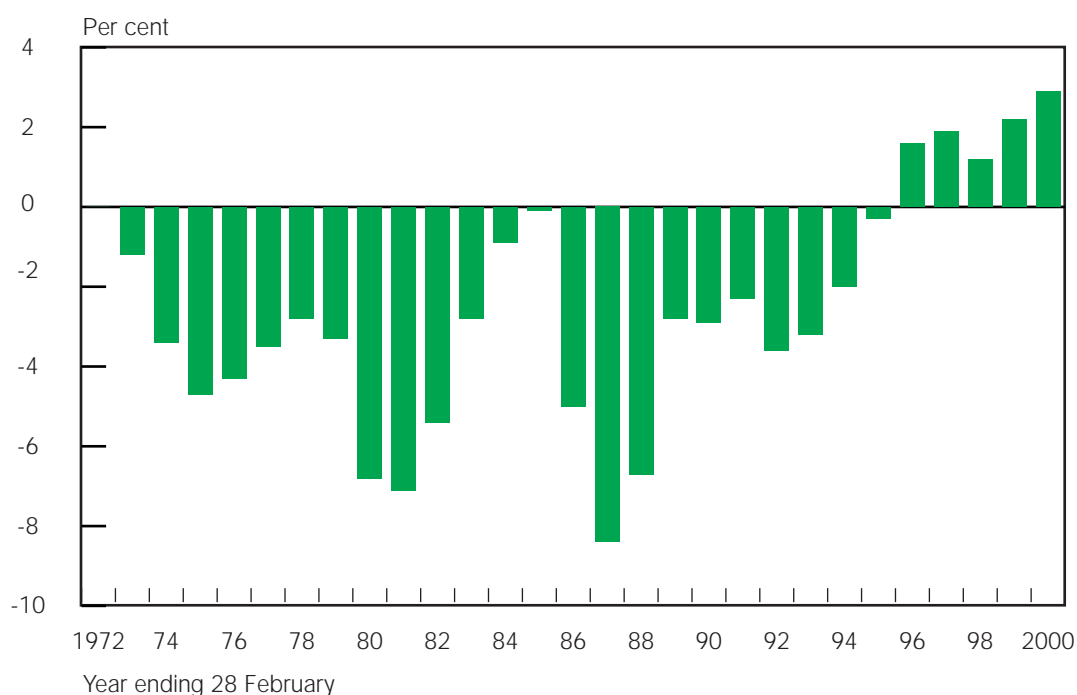
6.1 Real after-tax interest rates

There is no general agreement among economists about the impact that a rise in the real after-tax interest rate will have on people's decisions to consume or save. On the one hand, a rise in the rate of return on accumulated saving increases the opportunity cost associated with current consumption, and should raise the saving rate. On the other hand, the future income expected from this higher rate of return on saving may encourage current consumption. Because these two forces (i.e. a substitution effect and an income effect) pull in opposite directions, the net effect of a change in the rate of return cannot be determined with certainty.

Rising marginal personal-tax rates together with persistently high inflation seriously eroded the real after-tax rate of return on deposit-type saving in South Africa during the 1980s. The weighted average of the marginal tax rate of individuals increased from 15,8 per cent in the fiscal year 1971/72 to 31,6 per cent in 1990/91 and then to 35,5 per cent in 1999/2000. The real purchasing value of an average sum of R100 invested per individual at the beginning of the fiscal year 1971/72, assuming that interest income was capitalised at the end of each year, would have been reduced to

a low of R42,43 at the end of fiscal year 1994/95, before increasing moderately to R46,77 in the fiscal year 1999/2000. This loss of value was essentially caused by the progression in the scales of direct personal income tax and by the continuous inflation that put increasing numbers of taxpayers into higher income categories which have higher marginal tax rates. Graph 6 indicates that it has been only since 1996 that an average taxpayer could expect to receive a positive real after-tax return on a fixed investment over 12 months. This was on account of the recent relatively high level of nominal interest rates and the noticeable slowdown in the rate of inflation.

Graph 6 Real after-tax return for the average taxpayer on 12-month fixed deposits



It is generally believed that households' preference for saving in the form of deposit-type investment has been adversely affected by the negative to extremely low return in real after-tax interest rates. By the same token, however, this fall in the return on deposit-type investment could have encouraged the relative rise in corporate saving instead of direct saving by households.

6.2 Demographic trends

The life-cycle model of saving behaviour indicates that the overall saving rate of an economy will be influenced by the age distribution of households. This model distinguishes between stages in the normal life-cycle: dissaving among young adults engaged in education and in the early stages of establishing a family, saving among older working adults and dissaving among retired people. Societies with a large section of the population in the younger age group are likely to have a comparatively low saving rate. Those with a high rate of population growth will tend to have a declining saving rate.

According to population census statistics, the section of the population of South Africa in the age group 25 to 44 years increased from 25,5 per cent in 1970 to about 28,0

per cent in 1996. In addition, the dependency burden (the proportion of people too old or too young to be employed – i.e. in the age group under 20 years and over 64 years, as a ratio to the working-age population – those aged 20-64) declined from a ratio of 1,07 in 1970 to 0,99 in 1996. Normally, saving rates begin to rise once dependency rates begin to fall. However, if the “dependency ratio” remains relatively high and the bulk of the population is too young or too old to work, the rising proportion of younger consumers in the total population, with their greater preference for consumption than for saving, could contribute to the decline in the saving rates of private households.

6.3 Redistribution of income among households

The redistribution of real income in favour of low-income earners with a high average propensity to consume, tends to increase the proportion of domestic income that is devoted to private and public consumption and so reduces the saving rate. Transfers in the form of social pensions and social security expenditure also tend to lower the household saving rate, since these transfers alleviate the need to provide for old age, and consequently reduce people’s thriftiness.

Since the beginning of the 1990s the government has been committed to equalising assistance to the elderly for all those who qualify. A phased programme was introduced and reached completion in 1994. The programme gradually increased social pension payments to eliminate any inequitable distribution of old-age assistance to all qualifying elderly members of the population. The ratio of transfers by general government to households relative to gross domestic product more than doubled from an average of about 2 per cent in the early 1980s to 4,1 per cent in 1992, before tapering off to about 3 per cent towards the end of the 1990s. Moreover, there is a high dependency ratio among lower-income earners in South Africa. This means that there is a large number of household members who depend on the income of the sole breadwinner. The situation is exacerbated by rising unemployment and the extended family relationships among a large segment of South African society. These characteristics inevitably reduce households’ capacity to save.

An analysis of the information contained in various surveys of household expenditure (conducted by the Bureau of Market Research at the University of South Africa and Statistics South Africa) confirms that saving among lower-income households in South Africa is virtually non-existent. The saving rate of households with high-income earnings is notably higher than that of households classified as middle-income earners. The latest survey of income and expenditure patterns of households, namely the *October 1995 Income and Expenditure Survey of Households*, conducted by Statistics South Africa and published in September 1997, fully confirms these tendencies. This survey indicates that after most households have spent their disposable income on basic needs such as food, housing and transport, there is little or nothing left for saving.

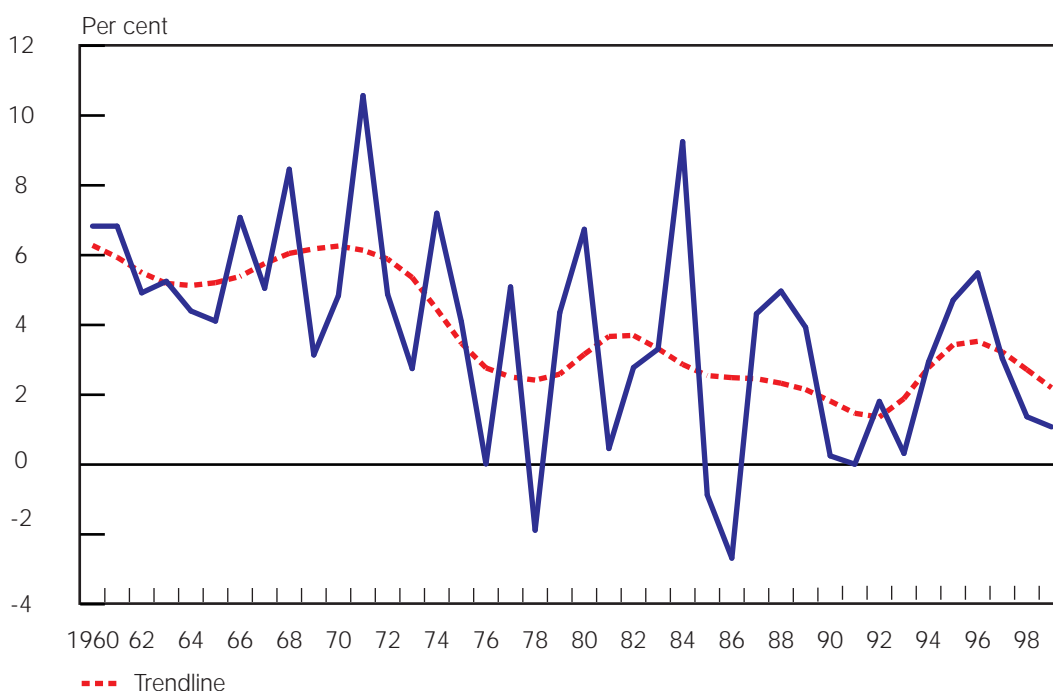
The Gini coefficient for South Africa as a whole, which stood at 0,59 for 1995, confirms that income is not equally distributed in the country (see Hirschowitz and Orkin 1997). This uneven distribution of income is clearly reflected in households’ patterns of expenditure and saving. Normally, saving ratios are expected to rise as income levels rise. However, as income inequality is an important form of consumer heterogeneity, which has received little attention in theoretical and empirical analyses, the potential links between saving and income inequality have consequently remained largely unexplored.

6.4 Slow income growth

Real household income growth slowed down perceptibly in the 1980s – see Graph 7. Inflation-adjusted current household income growth slowed down from 5,5 per cent per annum in the 1960s to 4,1 per cent in the 1970s and then to 2,8 per cent in the 1980s. Between 1990 and 1999 the average annual growth in real household income amounted to 2,3 per cent and since the beginning of the 1990s it has remained below the level of real household income projected by an extrapolation of the long-term trend.

The rising direct tax burden on individuals (see Section 8.2) restricted disposable income growth even further. Real personal disposable income increased at an average annual rate of 5 per cent in the 1960s and 4 per cent in the 1970s, but then slowed to 1,7 per cent per year in the period from 1980 to 1999. As a result of these developments and individuals' reluctance to come to terms with the slower pace of income growth, South Africa's household sector had a weaker propensity to save.

Graph 7 Percentage change in real income of households



6.5 Deregulation of financial institutions

The deregulation of financial institutions during the 1980s created many new lending opportunities for banks and other financial institutions and gave individuals much easier access to credit facilities. This allowed households to maintain higher levels of spending than would otherwise have been possible. As a result, households' use of consumer credit facilities relative to their disposable incomes in the 1980s moved to a much higher level than in previous years – see Graph 8.

In the mid-1990s, despite the stringent application of monetary policy, several retail organisations, in joint ventures with banks, launched aggressive marketing campaigns for the use of private-label credit cards in an effort to gain market share. As these credit facilities are available to a wide spectrum of households at different income levels, this contributed to an increase in the level of consumer credit. Consequently, the ratio of consumer debt to personal disposable income rose to a high of 62,1 per cent at the end of 1997, before declining to 58,6 per cent at the end of 1999. This is still about 10 percentage points higher than the average level registered towards the end of the 1980s.

Alongside this development, the rise in asset prices disguised the rise in households' overall indebtedness. Table 5 indicates that the prices of shares listed on the Johannesburg Securities Exchange rose on average at an annual rate of 11,7 per cent over the period 1985 to 1999, whereas the price of private dwellings rose at an average annual rate of 8 per cent over the same period. As one of the most important components of aggregate household net worth, the growth in stock market wealth accelerated to a compound annual rate of 11 per cent between 1992 and 1999. In addition, housing net worth which is more important for most households than equity wealth, started to gain momentum towards the end of the 1990s and grew at a compound annual rate of 7,4 per cent between 1996 and 1999. Empirical estimates suggest that for every extra rand added to the value of shares, consump-

Table 5 Price indices of shares listed on the Johannesburg Securities Exchange and average house prices

Period	Houses*	Shares**
1970.....	9.32	6.56
1971.....	10.01	5.99
1972.....	10.45	8.17
1973.....	12.00	10.00
1974.....	13.03	11.04
1975.....	14.04	9.55
1976.....	14.89	8.11
1977.....	15.27	7.87
1978.....	15.72	9.64
1979.....	17.65	13.53
1980.....	21.89	22.56
1981.....	30.28	20.39
1982.....	36.68	17.15
1983.....	44.17	24.01
1984.....	48.16	24.78
1985.....	44.04	26.67
1986.....	42.24	36.18
1987.....	46.68	48.93
1988.....	53.42	36.76
1989.....	61.06	49.14
1990.....	69.87	53.76
1991.....	79.03	57.55
1992.....	81.30	60.61
1993.....	85.64	69.38
1994.....	94.02	97.42
1995.....	100.00	100.00
1996.....	103.37	120.66
1997.....	110.98	124.83
1998.....	121.31	118.10
1999.....	128.00	124.74

Sources:

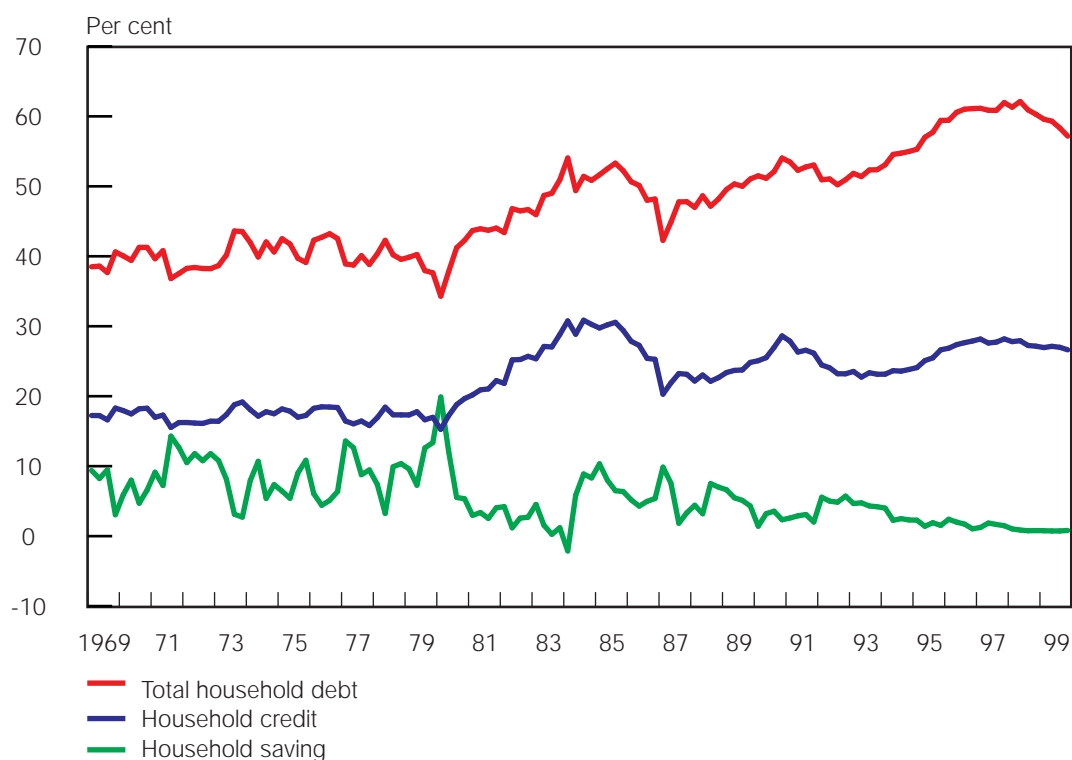
* *Quarterly Housing Review*, ABSA Bank (various issues).

** South African Reserve Bank, *Quarterly Bulletin* (various issues).

tion expenditure by households increases by between two and three cents. The wealth effect of housing is even more powerful. For every one rand appreciation in the value of the average home, household consumption rises by about six cents. These developments undoubtedly contributed to a wealth-induced increase in consumer spending and a concomitant deterioration in the personal saving rate during the 1990s.

As shown in Graph 8, the deterioration in the saving rate of households at the beginning of the 1980s coincided with the greater use of credit by private households. The lower level of the household saving rate in the 1980s and the 1990s is mirrored by the higher ratio of consumer credit to the disposable income of households. Although it is not possible to quantify the direct effect that the general deregulation of the financial sector had on saving in the 1980s, it also contributed to the rapid rise in outstanding credit and the resultant lower rate of household saving.

Graph 8 Household debt and household saving as percentage of households' disposable income



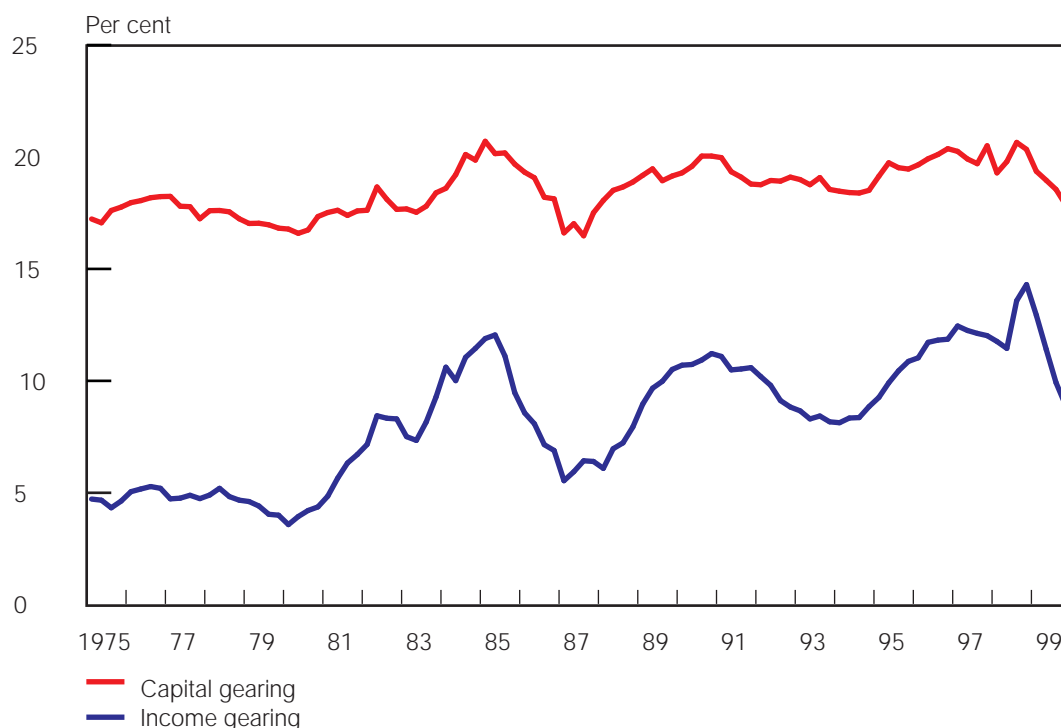
6.6 Consumer debt and personal saving

Personal saving is defined as the amount by which the current income of households exceeds their current expenditure. Dissaving occurs when current expenditure exceeds current income. In terms of standard accounting practices, the saving of a household or of any other organisation will be equivalent to the increase in the net asset value of the household or organisation. Increases in the credit commitments of households will accordingly cause a decline in the saving of households, unless this is counteracted by similar or stronger increases in their assets. Generally speaking, an inverse relation can be expected between increases in households' use of consumer credit and their saving over time.

Graph 8 illustrates the inverse relation between household debt and saving ratios. The deterioration in households' saving ratio at the beginning of the 1980s coincided with private households' greater use of credit. The lower level of the saving ratio since the 1980s is also reflected in the higher ratio of consumer debt (total of household credit and outstanding mortgages) to the disposable income of households.

This relation has also been observed in other countries since the 1980s (see OECD *Economic Outlook* – various issues). Moreover, as in these countries, the steady rise in the prices of assets in South Africa, such as fixed property and shares, increased the wealth of private households and also increased their ability to borrow. As shown in Graph 9, the ratio of consumer debt to the total assets of private households or the "capital gearing", increased from an average of about 17,5 per cent between 1975 and the beginning of the 1980s to 19,4 per cent in the 1990s.

Graph 9 Income and capital gearing of households



After an initial increase in the debt to assets ratio from 18,5 per cent in 1988 to nearly 20,0 per cent in 1990, the tightening of monetary policy and relatively high real interest rates helped to restrain the demand for credit and consequently this ratio fell to an average of 18,7 per cent between 1992 and 1994. Since the beginning of 1995 the "capital gearing" of private households has deteriorated again, to a level of 20,0 per cent in 1998, as households increasingly turned to credit to finance their higher levels of consumption expenditure, pushing their saving ratio to even lower levels. In 1999, the debt to assets ratio of households declined to 18,7 per cent. Similarly, the sharp increase in consumer debt together with high interest rates led to an increase in the cost of servicing consumer debt. Graph 9 shows that the debt service ratio or "income gearing" rose from a recent low of about 8,4 per cent in 1993 to a high of 12,8 per cent in 1998, before receding to 10,8 per cent in 1999.

The recent improvement in the “capital and income gearing” of household was the net result of a gradual decline in interest rates from their high levels in the second half of 1998. This was reinforced by the curtailment of consumption expenditure, especially on durable consumer goods, and the fact that real income growth improved because of a slowdown in the year-on-year rate of overall consumer price inflation.

A variety of macroeconomic and socioeconomic factors could, therefore, have contributed to the increasing demand for consumer credit. Firstly, higher income and wealth, greater stability of income and the consequent increase in consumer confidence among the new entrants to the modern segment of the economy during the post-transition period in South Africa have increased these households’ willingness to both spend and borrow.

In addition, the total increase in credit card loans by banks and certain retail chain-stores has been supported by aggressive marketing by these institutions through accompanying promotions and by offering reduced fees and rates to penetrate markets. Among other things, this has greatly facilitated the mass marketing of credit to individuals who are not bank customers and who live outside banks’ traditional service areas. The heightened competition among suppliers naturally attracted some marginal borrowers. The adverse selection of credit risks has increased the sustained high level of consumer debt and contributed to a decline in asset quality at some of the lending institutions.

Prior to 1994, several groups of the population have been unable to borrow from the banking sector because of factors such as low income or the lack of a creditworthy track record. These constraints have begun to ease in recent years. Many households in these categories now have sharply rising disposable incomes and they are beginning to spend their new wealth on expensive durables such as cars, furniture and other household equipment. Much of the increased spending is on credit, fuelled by a desire for conspicuous consumption to impress the neighbours and family. In addition, increasing numbers of the younger generation across the population spectrum are apparently gripped by status, image, labels and material goods as a way to demonstrate their wealth.

6.7 Contractual and discretionary saving by households

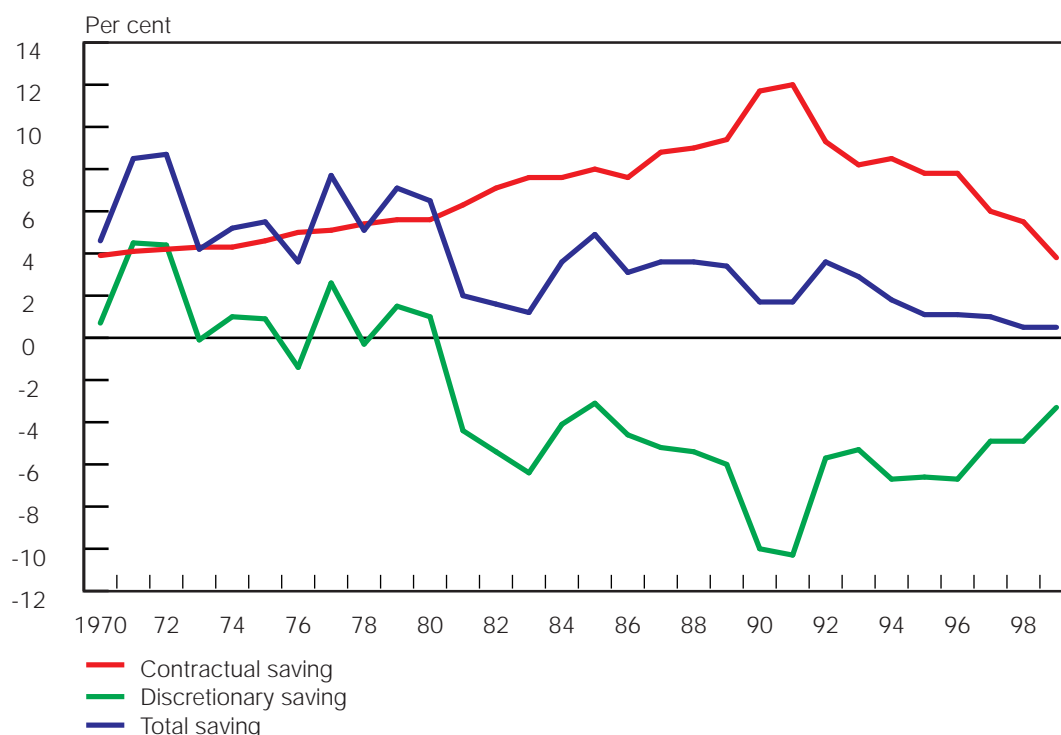
South Africa has a well-developed contractual saving industry. The assets of insurance companies alone amounted to well over 80 per cent of annual gross domestic product between 1995 and 1999. If pension funds are included, the ratio of these institutions’ total assets to gross domestic product rose substantially and compare favourably with similar ratios in advanced economies. There is an advanced and sound pension system comprising old-age pension and occupational pension schemes. In addition, the insurance business is also well-developed; in fact, the country has one of the highest levels of insurance premium payments relative to gross domestic product in the world. Total life and non-life gross premiums, including contributions to insured pension schemes, amounted to about 11 per cent of gross domestic product during the 1990s.

Approximate estimates of contractual saving flows can be obtained by calculating the gross flow of funds from private households to the traditional mobilisers of contractual saving, such as insurance companies and pension funds. Discretionary saving can be derived by subtracting the estimate of contractual saving from the estimate of aggregate household saving. The overall level of saving in South Africa

has declined, but gross contractual saving has increased – rising from an average of about 5 per cent of gross domestic product in the 1970s to about 8,7 per cent in the second half of the 1980s. In 1991 it rose to 12 per cent before falling back to approximately 5 per cent in 1999.

Owing to the development of sophisticated financial institutions in South Africa, the impact on saving by the household sector is that private households generally save with contractual saving institutions and borrow from banks and other financial institutions. Graph 10 contrasts the net dissaving of households at these discretionary saving institutions with their saving at contractual saving institutions.

Graph 10 Contractual and discretionary saving by households as percentage of gross domestic product



The information in the graph indicates that contractual saving in South Africa increased substantially in the 1980s and remained at a high level throughout the first half of the 1990s, whereas net discretionary saving turned into net dissaving. These developments were materially affected by taxation policies, the high rate of inflation, the redistribution of income among households in favour of the lower income groups, slow income growth combined with households' attempt to maintain living standards by using credit, and the fact that individuals were channelling more of their saving into inflation-hedging instruments.

The macroeconomic significance of the distinction between contractual and discretionary saving is of limited use. The dissaving by households with discretionary saving institutions is the result not only of decisions which individuals take about saving, but also of the investment decisions that these institutions make. Banks, in particular, have extended increasing amounts in loans to households to finance housing and consumer spending to such an extent that the banks' net lending to households exceeds the

increase in households' deposits at banks. To fund these lending operations, banks are relying on funds obtained in the wholesale market, for example, contractual saving institutions such as insurance companies and pension funds. Contractual saving institutions invest mostly in marketable government and private-sector securities and directly allocate only limited funds to private households and individuals. The classification of household saving as contractual saving and discretionary saving is therefore of limited significance – it is more an institutional classification of household saving and reveals little about the actual underlying propensity of private households for saving.

7. Interdependence of sectoral saving

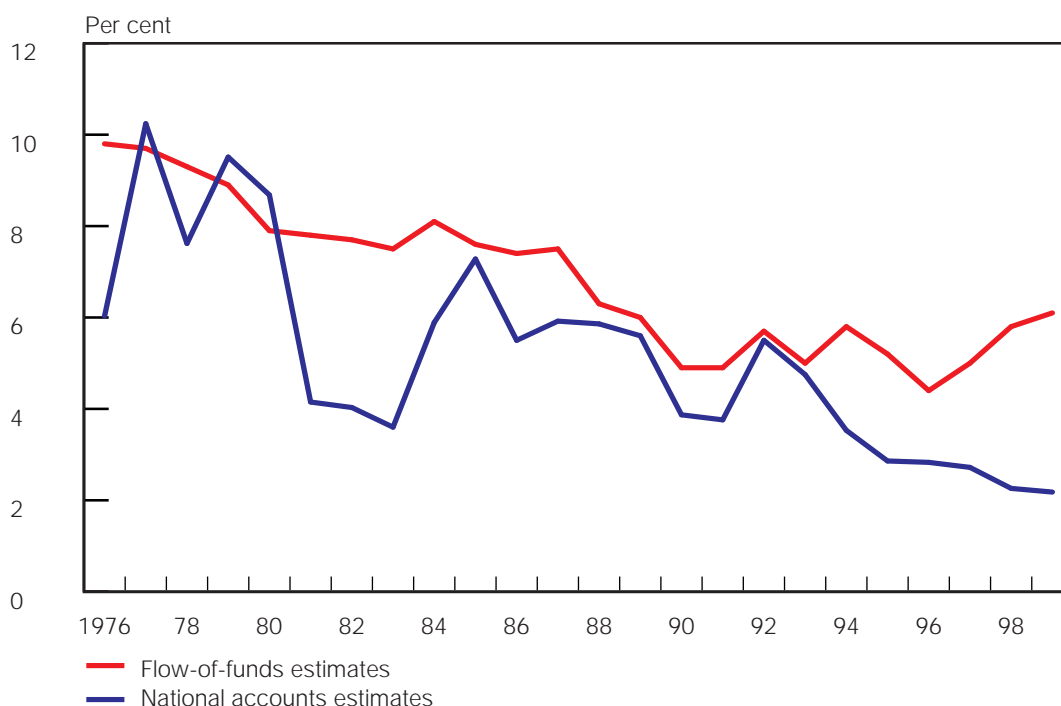
There is good reason to believe that the saving of households and that of companies are interrelated. The relative stability of the overall private-sector saving rate has already been noted. The explanation most often put forward for this stability is that households are able to “pierce the corporate veil” and perceive corporate saving decisions as saving actions taken essentially on their behalf. So people see corporate saving as an extension of, and a substitute for, saving at the household level.

Therefore, the concern that has been raised in recent years about the inadequacy of personal saving in South Africa, may not be too serious. The overall level of saving, and the evolution over time of the national or domestic saving rate, is far more important than the composition of saving.

An alternative measure of personal saving using flow-of-funds data corroborates the finding that the household saving rate weakened over time, but not to the same extent as indicated by the more comprehensive national accounts estimates.

Graph 11 compares the patterns in personal saving on the basis of the national accounts and the flow-of-funds estimates. Relative to the gross domestic product, the differences between the two estimates averaged 1,7 percentage points from the

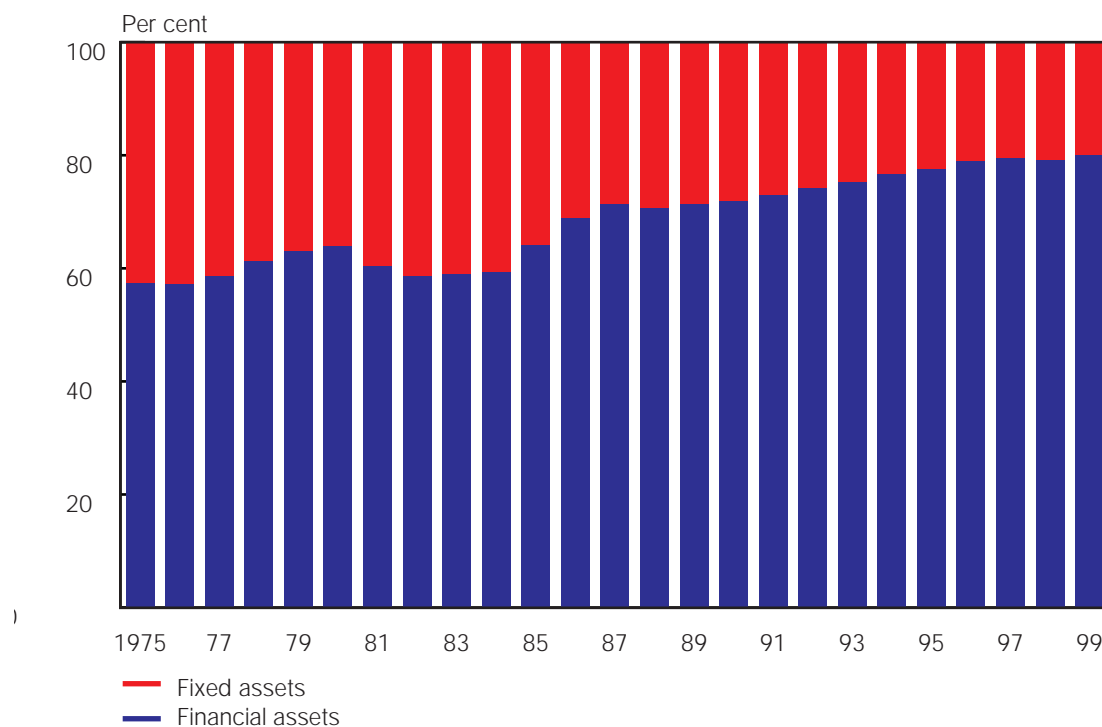
Graph 11 Household saving as percentage of gross domestic product



late 1970s to the mid-1980s. In the past decade, however, the gap between the two has grown to an average of 1,9 percentage points.

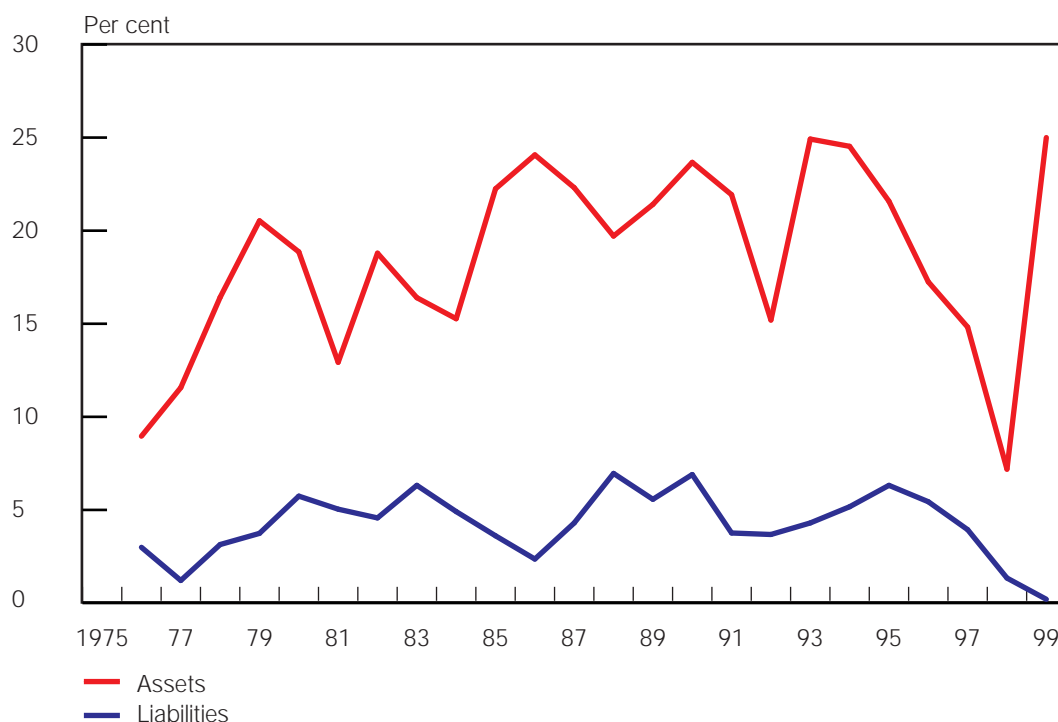
Perhaps of more importance to the economy at large and to financial markets than the level of the saving rates calculated by the two methods mentioned above, is the fact that an increasing share of personal saving has gone into acquiring financial assets during the 1980s and the 1990s. This means that private households have been supplying a large volume of funds to financial markets, in this way probably dampening the relatively high real interest rates. Furthermore, the high level of inflation in South Africa over the long term caused distortions which encouraged people to concentrate their personal saving in risk-avoiding institutions and financial assets in preference to riskier undertakings and fixed assets. Because of these developments, almost 77 per cent of private households' saving during the 1990s has been put into financial assets, compared with 60 per cent in the 1970s and 65 per cent during the 1980s (see Graph 12).

Graph 12 Households' financial assets and fixed assets as percentage of total assets



The tendency of private households in recent years to build up their financial assets at an unprecedented pace has hardly been noticed. Attention was mostly focused on debt-to-income ratios and repayment burdens. What seems to have happened is that households, at least in the aggregate, have taken further steps to expand both sides of their balance sheets – see Graph 13. This is probably a manifestation that the public is increasingly becoming financially sophisticated – a public which over the years has, for example, allocated income towards tax-immune types of assets and consequently has required larger borrowing to support ordinary consumer spending.

Graph 13 Changes in private households' financial assets and liabilities as percentage of gross domestic product



8. Measures to strengthen the domestic saving rate

The current saving rate of the South African economy is widely regarded as too low to support a sufficiently high economic growth rate. Government's "Growth, Employment and Redistribution Strategy" (GEAR) indicates that the aggregate saving rate will have to be raised to 23 per cent of gross domestic product in order to support an average growth rate of more than 4 per cent per year in real income. In 1999 the saving rate amounted to only 14,8 per cent of gross domestic product.

8.1 The relationship between interest rates and saving

One of the central issues in analysing the saving behaviour of countries is the relationship between changes in real interest rates, saving, investment and economic growth. During the 1970s, a familiar view was that an increase in real interest rates in developing economies should encourage saving and expand the supply of credit available to domestic investors, in this way enabling the economy to expand more quickly. Although several liberalisation programmes supported by the international financial institutions over the years have had as their explicit objective to raise interest rates from levels that in many cases were significantly negative in real terms, the impact on domestic saving and capital formation has been unclear.

In addition, empirical literature during the 1990s also found little consensus on the interaction between saving and the level of real interest rates. In a number of developing and especially in low-income developing countries, researchers have been unable to detect a significant effect which changes in real interest rates have on domestic saving. Empirical evidence in developing countries suggests that in the majority of cases the outcome of consumption growth after changes in real interest rates came close to zero, which implies a negligible response in aggregate saving to the real rate of interest.

Although there are a few examples (mainly industrialised countries) where the economies of countries show a greater responsiveness to changes in real interest rates, the general finding is that a low interest-rate sensitivity of final consumption expenditure is mostly related to relatively low income levels, and to situations where spending on necessities constitutes a high portion of overall household expenditure.

In developing countries and particularly among low-income communities, consumption tends to be related more to subsistence considerations. If households first have to achieve a subsistence consumption, the portion of their budget left after satisfying basic needs, is normally negligible. Consequently the elasticity of substitution and the interest-rate sensitivity of household saving will be close to zero.

The share of discretionary consumption relative to necessities in the budgets of low-income households can also contribute to a lower elasticity of substitution. If the consumption of necessities such as food is less substitutable over time than the consumption of other goods, then the elasticity of substitution will be lower for households with a larger proportion of necessities in their consumption pattern than for households where such goods are less important. Accordingly, for relatively low-income communities where the budget shares of food and other necessities are relatively high, the interest-rate elasticity of saving would be relatively low. In South Africa, households' consumption expenditure on food (including purchases from restaurants and hotels) accounts for 23 per cent of total expenditure. This is substantially higher than the average of 13 per cent recorded by high-income countries.

Another reason that saving may be less responsive to changes in real interest rates in low- and middle-income countries is because these countries are characterised by pervasive liquidity constraints. This implies that consumption growth in such economies is more likely to follow income growth than changes in expected rates of return. However, financial liberalisation should reduce the severity of borrowing constraints. In addition, this should increase the interest-rate sensitivity of private saving. The liberalisation of South Africa's financial markets during the second half of the 1980s and the surge in credit card facilities issued by popular retail institutions during the mid 1990s, reduced the presence of liquidity and borrowing constraints. It is conceivable that these innovations could have increased the overall interest-rate sensitivity of aggregate household spending. However, it is not surprising (taking into account all the various determinants of household saving) that the result is not robust.

The empirical findings of research on the interest-sensitivity of saving, undertaken by the International Monetary Fund in the 1990s, show that for the poorest countries a one percentage point increase in real interest rates should elicit an increase of only about one-tenth of a percentage point increase in the saving rate; in the middle-income countries (including South Africa) the rise in the saving rate in response to a one percentage point increase in the real rate of interest should amount to about half a percentage point, but for the wealthiest countries the increase in the saving rate relative to a similar change in the real interest rates was about two-thirds of a percentage point.

The general conclusion drawn from this analysis is that higher saving rates may not be forthcoming, even with relatively large increases in real interest rates, especially if the particular country is at the lower end of the income spectrum. However, even in the case of low-income countries, a change from negative to positive real interest rates, despite the fact that the change might have little impact on saving, may still be desirable from the point of view of macroeconomic stability and of improving the efficiency of investment.

8.2 The relationship between taxes and saving

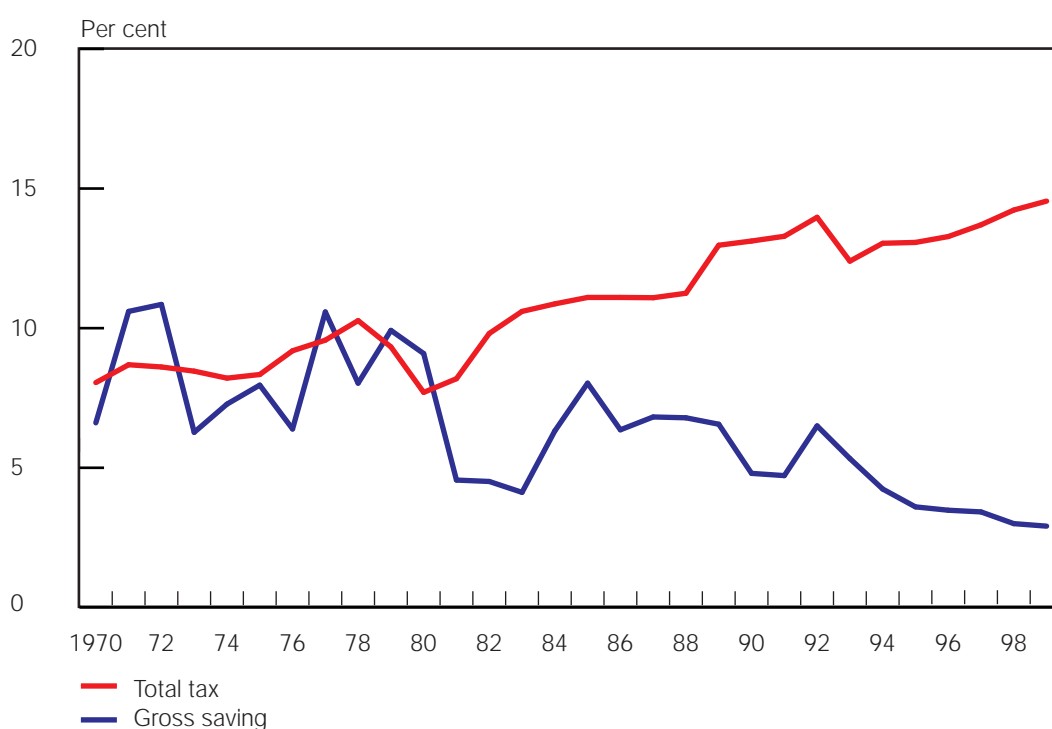
The usual method that governments employ in an attempt to influence saving behaviour is to exempt investment income in full or partially from income tax. The underlying idea is to influence the marginal rate of return on accumulated saving in order to influence the flow of saving.

If all investment income is accorded exactly the same tax treatment, a change in the tax rate will have an identical effect on the marginal after-tax rate of return on all forms of saving. Because of the offsetting substitution and income effects, the net change in overall saving flows arising from such a tax change is uncertain. The saving rate could be either raised or reduced because of such a tax change. Therefore the government has a limited ability to influence the private saving rate through adjustments in the after-tax rate of return on saving.

Although most of the empirical literature does not present clear evidence that the effect of taxes on saving is either statistically significant or quantitatively important, a recent investigation into the relation between taxation and the household saving rate based on data from OECD countries, provides meaningful evidence of the impact of taxes on household saving. In particular, changes in income tax (including capital income and wages) were shown to have a far more negative effect on the household saving rate than on consumption expenditure (see Tanzi and Zee 1998).

The increase in total taxes paid by the household sector in South Africa relative to gross domestic product since the beginning of the 1980s has been accompanied by a decline in gross saving by households (see Graph 14). A split of the taxation paid by households between income tax and consumption taxes shows that income

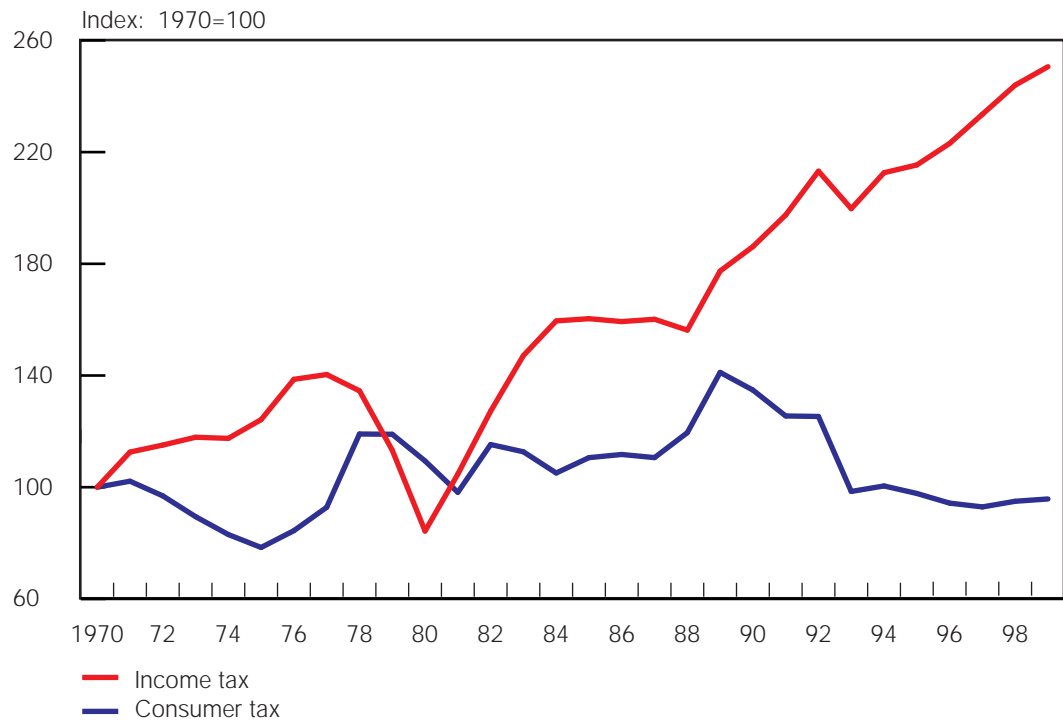
Graph 14 Total taxes and gross saving by households as percentage of gross domestic product



3 The underlying assumptions are that the interest elasticity of saving is positive and that the income elasticity of consumption is less than unity in the short term.

tax, as a ratio of gross domestic product, rose at a much faster rate from the beginning of the 1980s than the corresponding ratio of consumption taxes (see Graph 15). Therefore, according to differences between the impact of income taxes and consumption taxes on household saving (see Tanzi and Zee 1998), and given the high average propensity of households in South Africa to consume from disposable income, a move to make income tax less important than consumption taxation could lead to a higher rate of aggregate household saving.³

Graph 15 Income tax and consumer tax as percentage of gross domestic product



4 In a study done by Corbo and Schmidt-Hebbel on saving in developing countries, the authors tested the sensitivity of private saving to improvements in public saving generated by tax increases and expenditure reductions. The findings of the study indicate that if saving by the general government increased by 1 percentage point of gross domestic product through a **reduction in consumption expenditure**, saving by the private sector would be reduced by 0,16 to 0,50 percentage points of gross domestic product depending upon the model specifications regarding the expected permanence of the increase in government saving.

Likewise, if government saving is increased by 1 percentage point of gross domestic product through an **increase in taxes**, private saving would be reduced by 0,48 to 0,65 percentage points of gross domestic product depending upon the model specifications of the expected permanence of the increase in government saving.

The loss of tax revenue due to tax concessions could give rise to an increase in the budget deficit if it is not accompanied by a reduction in government expenditure or an increase in other government revenue. The use of tax incentives to stimulate saving may therefore turn out to be counter-productive: tax incentives may or may not increase private saving, but will cause a loss of tax revenue and a probable decline in government saving. The overall saving rate is more likely to fall if the tax-paying community does not save the full benefit of the tax cut.⁴

The effect of introducing tax incentives to encourage specific forms of saving would be to achieve a one-off permanent shift in saving flows to those forms of saving that are favoured by the change in tax. Once the tax concession is fully capitalised in the price of a financial asset, it forms an integral part of the return to the form of saving it was designed to encourage. A lasting effect on the overall flow of saving accordingly requires not merely the introduction of incentive measures, but also their continuous improvement.

In short, tax incentives to influence saving behaviour are far more likely to influence flows to the various forms of saving, rather than to have a lasting impact on the over-

all saving rate of the economy. Given all the uncertainties about the effectiveness of government policies to alter private saving, direct actions to increase the domestic saving rate by cutting budget deficits (from the expenditure side) and raising government saving seem a much surer way to strengthen the national saving effort.

9. Summary and conclusion

Total private-sector saving relative to gross domestic product has demonstrated remarkable resilience in the long run. The average private-sector saving rate in recent years has sustained levels higher than those attained during the 1960s when the general economic environment was far more conducive to a stronger saving performance. Nevertheless, as a result of considerations pertaining to taxation and inflation, the composition of private-sector saving has changed considerably; corporate saving now constitutes a much greater part of total private-sector saving than before.

The weakening in the aggregate domestic saving rate during the 1980s and 1990s should mainly be attributed to a weakening of general government saving which eventually turned into net dissaving. Given the longer-term relative stability of the private-sector saving rate and the uncertainties attached to the interest-sensitivity of saving and tax measures aimed at strengthening private-sector saving, one of the best ways to improve the country's saving rate and growth performance appears to be a significant reduction in government dissaving – by curtailing recurrent expenditure to the extent that government dissaving could be eliminated and positive additions made to private-sector saving. In addition, government policy could also make an important contribution to increasing saving by the private sector, and to the efficient use of these savings, by providing a macroeconomic framework which keeps inflation low.

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Annexure 1: Link between the national accounts and the balance of payments

The national accounts include a summary of the transactions of the domestic economy with the rest of the world. Since gross saving is defined as gross national disposable income (GNDI) less consumption, the extent to which investment exceeds saving can be shown to match the external current-account deficit.

This relationship can be demonstrated through the following equation:

$$\begin{aligned} \text{GNDI} &= \text{GDP} + \text{NFP} + \text{NTRF} \\ &= \text{CP} + \text{CG} + \text{IP} + \text{IG} + (\text{X} - \text{M} + \text{NFP} + \text{NTRF}) \\ \\ \text{S} &= \text{GNDI} - \text{CP} - \text{CG} \\ &= \text{CP} + \text{CG} + \text{IP} + \text{IG} + (\text{X} - \text{M} + \text{NFP} + \text{NTRF}) - \text{CP} - \text{CG} \\ \\ \text{or } \text{S} - \text{I} &= \text{CAB (denoting the current account balance)} \\ \text{SP} + \text{SG} - \text{I} &= \text{CAB} \\ (\text{SP} - \text{IP}) + (\text{SG} - \text{IG}) &= \text{CAB} \end{aligned}$$

where

GDP	=	gross domestic product
NFP	=	net factor payments
NTRF	=	net transfers received
CP and CG	=	consumption expenditure, private and government
IP and IG	=	gross capital formation, private and government
X	=	exports of goods and non-factor services
M	=	imports of goods and non-factor services
S	=	saving
SG and SP	=	saving by the government and private sector

The equation demonstrates that the current-account balance (CAB) is equal to the difference between private-sector saving and private-sector investment, plus the difference between government saving and investment. According to this equation, a deficit in the external current account implies that either private saving is less than private investment or government saving is less than government investment, or both cases may be true. Consequently the balance on the current account, with the sign changed, can be viewed as the amount of "foreign saving" used to finance a gap between domestic saving and investment.

Previous Occasional Papers

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