



Note on the funding structure of non-financial companies, 1990 – 2003

by Z B Jansen

Introduction

Companies are responsible for generating the major share of output in South Africa, thereby exercising a strong demand for financial resources. The quantity and composition of such financing should ideally be studied within the accounting framework recommended by the *System of National Accounts* 1993 (SNA 93), which provides guidelines for the compilation of consolidated balance sheets for the household sector, the financial and non-financial corporate sector, and the general government.

Although complete balance sheets for these institutional sectors are not currently available in South Africa, it is possible, by making use of selected data sources, to construct an approximation of some key components of the balance sheet for the corporate sector. This note briefly examines some developments in corporate debt financing and other sources of finance during the 1990s and the early years of the new millennium.

The main types of finance that companies may avail themselves of as well as the advantages usually associated with debt financing are summarised in the following section. Thereafter developments in the composition of the funding structure of industrial companies listed on the JSE Securities Exchange SA (JSE) are presented. Special attention is devoted to debt financing. This is followed by a brief analysis of the corporate sector's preference for debt financing, while some concluding comments are presented in the final section.

The main types of financing and advantages of debt

The corporate sector essentially utilises three main types of finance. These are share capital, retained income or reserves, and debt. Collectively, share capital and reserves are referred to as equity. Retained income may be regarded as the near-equivalent of accumulated corporate saving and is an internally generated source of finance. Equity funding is provided by shareholders who expect some return on their investment. This return may either be in the form of dividends paid to shareholders or in the form of internal growth generated by the income retained or saved. Compensation for debt utilisation is typically in the form of interest payments to creditors. The rewards for the provision of finance entail a cost to companies, and the mix of the main types of finance utilised is strongly influenced by availability and relative cost considerations.

Utilising additional debt may, in certain circumstances, improve profitability and returns to shareholders. In essence, productive assets may be acquired through mobilising debt capital, thereby raising the earnings capacity of a firm. This process is generally referred to as leveraging. As long as assets are employed productively, leveraging contributes to the attainment of higher returns on equity. Leveraging, however, is a constrained process. Profitability cannot be raised indefinitely by increasing the debt-to-equity ratio. The debt-to-equity ratio is a reflection of the portion of a firm's funding needs that is satisfied by raising interest-bearing debt. Debt financing has a relative advantage over equity financing that stems from the deductibility of interest payments for purposes of calculating taxable income. Thus, for a specific configuration of interest rates and tax rates, an optimal combination of debt and equity financing can be determined (Bevan and Danbolt, 2002:159).

Changes in the composition of the funding structure of non-financial companies

McGregor BFA developed an information system containing standardised financial information about companies listed on the JSE. Most non-financial companies are classified together under the heading “industrial companies”, encompassing companies in the manufacturing, construction, retail-trade and telecommunications subsectors of the economy. The comprehensiveness of this dataset makes the information adequately representative of the characteristics of the entire non-financial corporate sector of the South African economy and is useful for analysing changes over time in capital structures.

The funding structure of industrial companies for the period 1990 – 2003 is summarised in Table 1. The various sources of funding are expressed as percentages of total funding. Some developments in the more important liability components are highlighted in the paragraphs below.

Table 1 The funding structure of industrial companies listed on the JSE Securities Exchange SA as a percentage of total funding

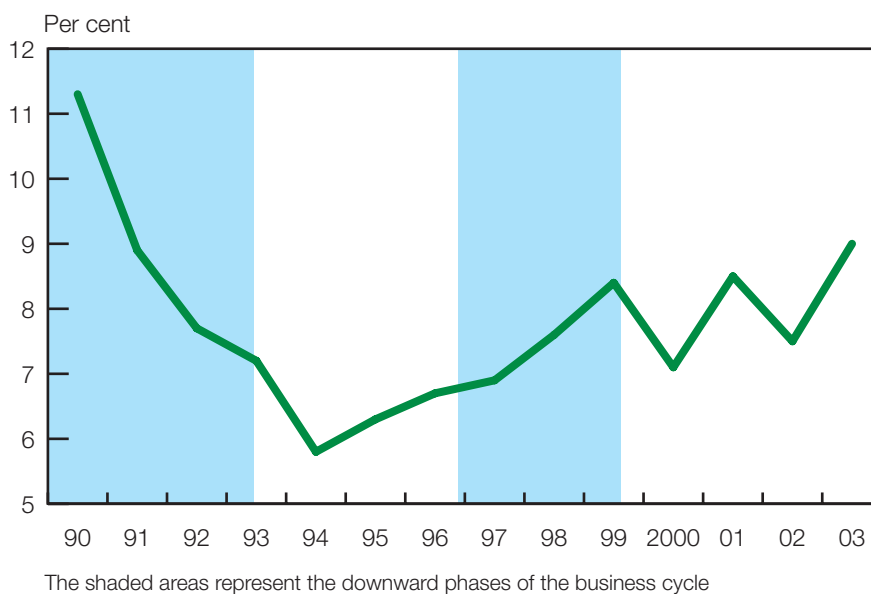
Year	Ordinary share capital	Non-dis-tributable reserves	Distribu-table reserves	Other equity*	Interest-bearing debt	Trade creditors	Other current liabilities	Total
1990.....	4,4	15,0	24,1	10,7	19,1	22,1	4,6	100
1991.....	4,2	12,6	27,4	10,0	20,2	21,7	3,9	100
1992.....	3,8	14,4	24,7	11,0	20,9	21,6	3,6	100
1993.....	3,5	14,3	25,1	10,9	20,8	21,8	3,6	100
1994.....	3,6	15,9	25,5	8,1	20,7	22,5	3,7	100
1995.....	3,4	16,8	24,6	8,5	19,8	23,4	3,5	100
1996.....	3,1	17,9	24,0	8,2	19,6	23,4	3,8	100
1997.....	2,9	19,3	25,3	8,4	18,7	22,2	3,2	100
1998.....	3,8	19,4	23,0	5,4	25,4	20,3	2,7	100
1999.....	3,5	18,2	20,9	5,5	28,6	21,1	2,2	100
2000.....	3,4	16,1	25,1	4,4	28,4	20,6	2,0	100
2001.....	3,2	16,7	24,2	7,3	26,6	19,7	2,3	100
2002.....	3,5	15,4	26,3	5,6	26,5	20,2	2,5	100
2003.....	3,6	18,6	25,2	2,9	25,6	21,1	3,0	100
Averages								
1990 – 1994.....	3,9	14,4	25,4	10,1	20,3	21,9	4,0	100
1995 – 1999.....	3,3	18,3	23,6	7,2	22,4	22,1	3,1	100
2000 – 2003.....	3,4	16,7	25,2	5,1	26,8	20,4	2,4	100

* For example, preference shares
Source: McGregor BFA

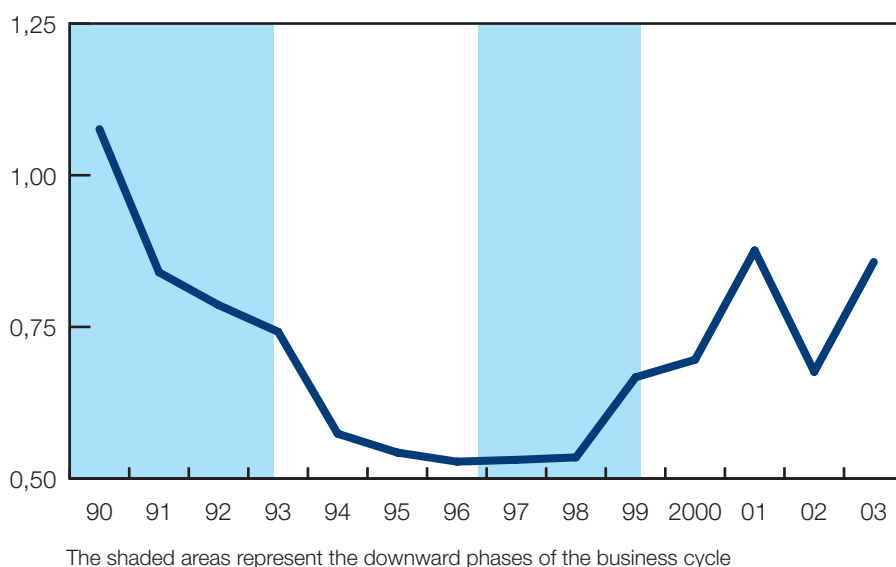
As equity issuance in the form of ordinary share capital is believed to be an easily accessible source of finance for listed companies, ordinary share capital as a percentage of total funding represents a surprisingly small portion of funding. It has declined steadily from 4,4 per cent in 1990 to about 3 per cent in 1996 and 1997. Subsequently, indications of an upward trend emerged. The average earnings-price ratio of industrial companies as calculated by the South African Reserve Bank (i.e. the inverse of the price-earnings ratio), which is generally regarded as an indicator of the cost of share capital, has increased steadily since 1994 from a low of less than 6 per cent to 9 per cent in 2003 (see Graph 1). However, relative to the cost of borrowed funds, the cost of ordinary share capital remained comparatively low during the five-year period from 1994 to 1998, creating favourable circumstances for increasing the relative importance of

ordinary share capital (see Graph 2). Evidence of this expected increase emerged when ordinary share capital as a percentage of corporate funding moved from about 3 per cent in 1997 to about 4 per cent in 1998 but faltered again towards 2001, mostly on account of debt substitution. This was subsequently followed by a slight increase in the relative contribution of this type of funding since 2001, supported by the stabilisation of its cost relative to the cost of borrowed funds during 2002 and 2003.

Graph 1 The earnings-price ratio of shares of industrial companies



Graph 2 The cost of ordinary share capital relative to the cost of borrowed funds

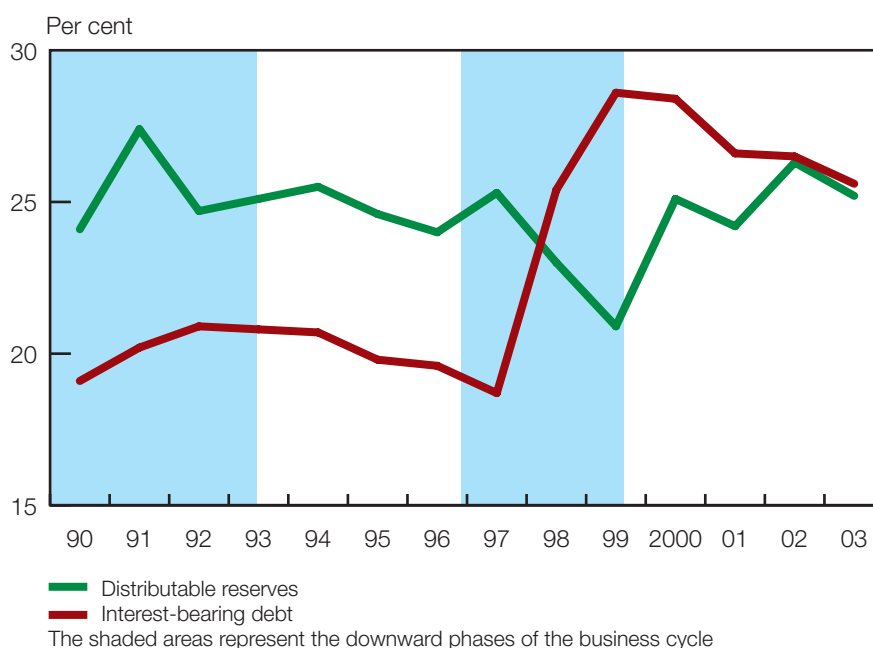


Distributable reserves or internally generated funding represents, on average, the largest portion of total funding. As a portion of total funding, *distributable reserves* has

fluctuated around 25 per cent since 1990, experiencing an abrupt deterioration around 1998 and 1999 when the financial crisis in Southeast Asia left its mark on the South African economy, but recovered thereafter (see Graph 3).

Interest-bearing debt represents the second largest portion of total funding. A steep increase occurred around 1998 in the relative importance of this kind of funding, partly related to the significantly higher interest rates and concurrent decline in sales volumes experienced by many companies, which temporarily forced them to incur more debt. This ratio receded into 2000 and beyond as financial conditions eased (see Graph 3).

Graph 3 Interest-bearing debt and distributable reserves relative to total funding

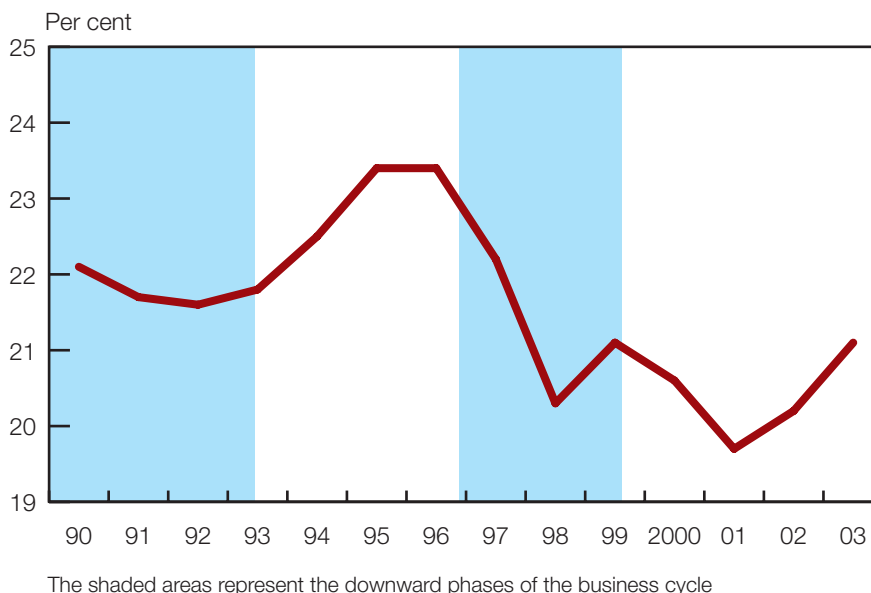


Interest-bearing debt tends to increase relative to total funding during periods of economic downswings. During recovery phases of the business cycle, profitability is usually bolstered by heightened economic activity and companies may be inclined to utilise less debt relative to internally generated funds. Interest-bearing debt may be seen as a substitute (though not perfect) for distributable reserves, especially during periods where aggregate income growth slows down. For example, distributable reserves as a percentage of total corporate funding declined sharply in 1998 and 1999, while the proportion of interest-bearing debt rose strongly. During this period, corporate profitability came under severe stress when, following the depreciation of the rand in 1998, the revaluation losses on foreign-currency denominated debt were written off against corporate profits. The sharp rise in the contribution of interest-bearing debt to total funding was also echoed in a strong rise in credit extended by the monetary sector to the corporate sector during 1998, and by a sharp increase in the ratio of such credit extension to gross domestic product.

Currently, *trade creditors* constitutes the third largest source of funding and differs from interest-bearing debt in two important ways. Firstly, it is normally seen as an interest or cost-free source of finance. Secondly, it represents a spontaneous source of finance as it arises from everyday business operations. For example, if sales and consequently

purchases were to double on account of an improvement in demand conditions, the amount owed to trade creditors is also likely to double. As such, this type of finance reflects an element of cyclicalness (see Graph 4).

Graph 4 Trade creditors relative to total funding



Calculations of the duration of the average settlement period of trade creditors during the working capital cycle indicate that the duration increased steadily from 1,74 months in 1989 to a high of 2,43 months in 1999, reflecting the tight financial conditions of 1998 and 1999, but receded during the period 2000 – 2003. This increase in the average settlement period had a supporting effect on corporate profitability since the need for other interest-bearing debt was minimised.

Debt financing and the real cost of debt

The real cost of debt is essentially determined by the interplay of three variables, namely the nominal cost of debt, the corporate tax rate and the inflation rate. This interrelationship is summarised in the following algebraic expression:

$$K_{dr} = \frac{(1 + (K_{dn}(1-T)))}{1 + R} - 1,$$

where

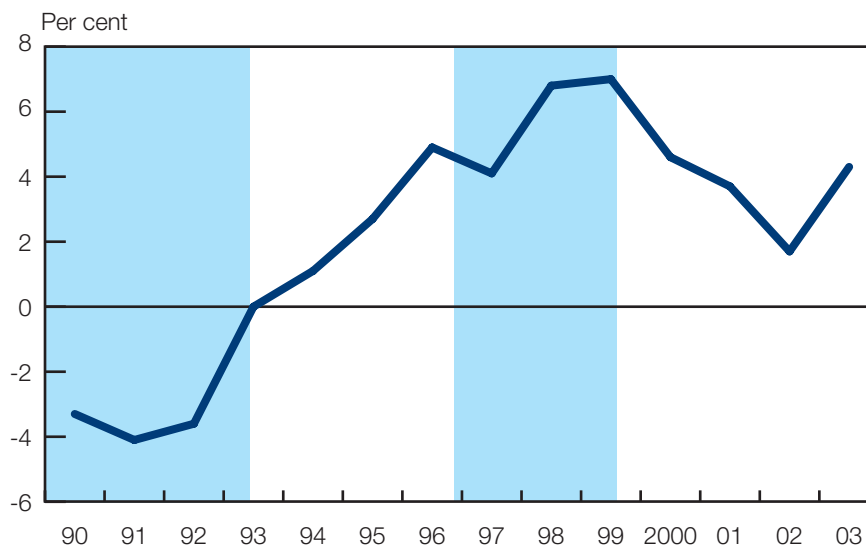
- K_{dr} = real after-tax cost of debt;
- K_{dn} = nominal cost of debt or interest rate;
- R = inflation rate; and
- T = the corporate tax rate.

Using the prime overdraft rate as an approximation of the nominal cost of debt and changes in the consumer price index to represent inflation, estimates of K_{dr} can be obtained.

As shown in Graph 5, the estimated real after-tax cost of debt finance was less than zero until 1992. From 1993 to 1999 the real cost of debt was consistently positive and generally rising. Though still maintaining a positive value, the real after-tax cost of debt

declined from 1999 to 2002 but then rose slightly in 2003. For profit-maximising companies, rising debt-financing cost could be seen as an incentive for economising on the use of debt, and relying more heavily on other more affordable sources of finance.

Graph 5 The real after-tax cost of debt



The shaded areas represent the downward phases of the business cycle

The deterioration in overall economic conditions that followed the Southeast Asian financial crisis around 1998 created circumstances in which many companies had to fall back on bank credit to tide them through a difficult period which was seen as temporary and of relatively short duration. The “distress” borrowing at that time led to a sharp rise in the ratio of debt finance to overall corporate financing, despite the positive and rising real after-tax cost of debt finance. The overall recovery in economic conditions since late 1999 assisted companies in gradually working down their debt-financing ratio.

Conclusion

Debt financing is an important source of finance for the non-financial corporate sector and will remain part of the financing mix of companies. The optimal mix of debt and other sources of finance depends on a range of factors of which cost considerations are important. The analysis of empirical evidence indicates that debt levels increased noticeably during the second half of the 1990s before receding slightly after the turn of the century. The intensity of the adverse financial conditions experienced during 1998 and 1999 brought about an unusual environment associated with some distress borrowing. Subsequently, a much more “normal” environment of lower inflation and interest rates has been established. Within such an environment, the prudent utilisation of debt will be conducive to South Africa’s future economic development.

References

Bevan, A.A. and Danbolt, J. 2002. Capital structure and its determinants in the UK – a decompositional analysis. *Applied Financial Economics*, Vol. 12, pp. 159-170.

McGregor BFA database.