CHAPTER 5

STRUCTURAL FACTORS INHIBITING A SUCCESSFUL BOND MARKET IN SOUTH AFRICA

In Chapters 3 and 4 of the report several aspects that could inhibit the success of a bond market were dealt with in detail. These chapters identified that markets should be efficient both in impounding information and in their operations. In Chapter 3 the report dealt with the role of risk in the valuation process. Risk was identified in that section of the report as a major factor, and in the case of corporate bonds credit risk was considered very important. In South Africa, a credit rating system, which may provide investors with information to assist in the pricing of bonds, does not exist. The information, although available to investors, is difficult and costly to analyse and quantify, without a proper investor rating service. It is therefore suggested that such a service would provide investors with information necessary to efficiently price bonds as the absence of such a rating service inhibits this process. Factors that inhibit the operational efficiency of the South African market will also result in the debenture market's success being limited. These factors were considered in Chapter 4, where it was noted that the S.A. market did not appear to be operationally efficient.

In this chapter certain structural factors, which develop on areas identified and discussed in the previous chapter will be considered. These include the effects of prescribed asset requirements, the market size, issue and issuers size, the sophistication of market participants and the effect of an unsuccessful secondary market on new issues and legal restrictions. The legal restrictions dealt with are S11(a) of the

Income Tax Act and S38(1) of the Companies Act.

The review will assess the significance of these areas and whether their impact has inhibited the success of the market. It is likely that certain of these factors will have an impact, although individual amendments are not likely to alter the current debenture market substantially. However, the systematic removal of certain of these restrictions, together with changes in factors discussed in Chapters 3 and 4 are likely to improve the market.

5.1 Prescribed Asset Requirements

Institutions such as life insurance companies and pension funds are required to invest a certain proportion of their funds in prescribed investments. These prescribed investments are all fixed income securities, and the securities included in these categories are specified by the public investment commissioner. (These were discussed in Chapter 4). The original reason for this requirement was to protect policy holders and pension fund members, by stipulating that institutions hold a certain portion of their assets in these safe investments. However, these prescribed investment limits have been increased to the extent that they have largely served to assist the government in financing its public borrowings. As 52% of these institution's funds have to be invested in these assets, these limits are disproportionate to the safety levels really required. This has restricted these institutions in their investment strategies and has limited the returns they are able to generate from a portfolio. Consequently the balance of institutional funds has been directed towards more risky investments, offering higher returns. The major portion of these funds has been directed into equity and property investments while fixed income securities have been avoided because of the already high exposure to these markets.

The effect of these restrictions has been to exclude major players from the corporate debenture market. These players, it is suggest , would otherwise have been more active in this market, and could possibly have been involved in more in trading debentures. The amendment of the prescribed asset requirements would possibly increase opportunities in the corporate bond market. Other participants aware of the opportunities to buy and sell these bonds with relative ease could, as a result, become more active in the market.

5.2 The Implications of Market, Issue and Issuer Size

Size has been identified as a fairly significant factor in the success of a particular issue and of the market as a whole. Size in the S.A. gilt market has also been identified as important by many institutions who trade in that market. This is evidenced by the size of the issues in which most trade takes place. However participants do point out that this is not the only factor considered and other aspects peculiar to the particular issue could have an impact.

An analysis of the S.A. gilt market activity indicates that the majority of trade takes place in a small number of issues (see Appendix II). The most significant factor affecting this is issue size, as the larger issue are more widely held and are therefore easier to trade. This attracts traders as they are easily able to move into and out of these issues. Hedging strategies are also easier to employ, as option writers are more willing to write options in a market where they can more easily purchase or sell securities in order to fulfil their obligations while having little impact on these security prices. Participants in the market are generally large investors such as institutions, who often deal in very large units. (The minimum unit in the gilt market is R1 million). In comparison many issues in the debenture market have small market capitalisations (in some cases just over R1 million). Therefore trade in these issues is limited and dealing in these securities is the equivalent of dealing in "odd lots".

Market size is significant for the same reasons as issue size. In a market that is very small, such as the S.A. debenture market, issues tend to be tightly held. This limits market participation and results in thin trading, making the market unattractive to traders. The market is also unattractive for hedging strategies for the above reasons.

The issuers size is inter-linked with the above factors, as small issuers can only offer small issues, which do not usually attract a wide spread of investors. These issues are as a result generally poorly traded and therefore unattractive for the reasons discussed above. In addition, the level of credit risk of small companies is higher than that of large companies. This aspect is identified by Moody's and Standard and Poor's in their rating of bonds, and small issues are down rated as compared with a similar larger issue (Cohen, J.B., Zinbarg, E.D. and Zeikel, A. - 1978 - pg.416). In South Africa the absence of a credit rating system would make this aspect of default risk more difficult to quantify (as discussed in Chapter [illegible]).

5.3 The Effect of the Unsuccessful Secondary Market on New Issues

It is notable that very few new debenture issues were made during the listing boom of 1986/87. There are also a limited number of debentures in issue on the JSE. There were just over 130 at December 31, 1987. Furthermore many of these represent different classes of debenture of the same issuer. The figure of total issuers of listed securities is less than 70 compared with well over 800 listed share issues (The JSE Handbook, December 1987). This suggests that the number of issues participating in the market is limited, and few new issues are introduced to the market.

In Chapter 4, the importance of a successful secondary market was discussed. Reilly emphasis that "The primary market (i.e. new issue market) would be seriously hampered in its function of helping firms acquire new capital without the liquidity provided by the secondary market" (Reilly, F. - 1981 - pg.138). It is therefore suggested that the inability to trade debentures in the S.A. market inhibits the raising of new finance. There are a limited number of investors willing to become involved in this market as they may not be able to liquidate their holdings easily. The investor attracted would therefore have to be one who would purchase with a buy and hold strategy in mind. These investors would have to satisfy themselves of the company' ability to meet all future interest payments and capital repayments. This would therefore limit the participants to very safe, financially sound companies. A review of listed debentures indicates that these issuers are generally financially sound companies (See Appendix I).

5.4 The Impact of Legal Restrictions on the Debenture Market

This section focuses on two legislative restrictions that may have considerable impact on the issue of debt and therefore restrict its use in certain instances. Although these are not the only legal restrictions that may have an impact, they are considered to be the most significant. The restrictions involved are S11(a) of the Income Tax Act, 1962 and S38(1) of the Companies Act, 1973 as amended.

Section 38 of the Companies Act covers the maintenance of capital by companies. This section prohibits companies from providing financial assistance for the purchasing of its own shares (Cilliers, Benade & De Villiers - 1972 - pg.294). Although the section provides certain exemptions, these exemptions are narrow and of no relevance to the report. A detailed discussion of the section is outside the ambit of the paper but what is of importance is the section's affect and consequences.

The section prohibits the use of debt to repurchase a company's shares. This is of significance as it limits takeovers where debt is substituted for equity. These takeovers have occurred in the United States and have resulted in growth in the corporate debt market, particularly the low-grade sector. Although there has been a substantial growth in the low-grade sector in the United States as a result of this method of financing it forms a relatively small portion of the total U.S. debt market. In 1978 the total low-grade corporate debt represented 3,8 per cent of the total corporate debt market with less than $10 billion in issue, while in 1984 this represented 11,2% of the market or $42 billion (Altman and Nammacher - 1985 - pg.26).

Therefore this sector of the takeover market is relatively small, and if it represented 11% of the S.A. market would be extremely small at just over R120 million. This would not enable investors to hold a diversified portfolio, nor would it create opportunities for trade. Consequently, the prohibitions of S38 of the Companies Act are not likely to have any significant impact on the debt market in its present form.

General expenditure, including interest expenses, is deductible in terms of S11(a) of the Income Tax Act. A number of requirements need to be met in order that expenses be deducted in terms of this provision. The only requirement discussed in this report is that relating to expenditure being [illegible] the production of income". This in practice is the requirement which has the greatest implications for [illegible] re issues. The balance of the requirements are assumed to apply for the purpose of the study (Silke, A., Divaris, C. and Stein, M. - 1982 - pg.315).

The term "income" in terms of the Income Tax Act refers to gross income less exempt income. Therefore, where debentures are used to finance activities that result in exempt income, the interest expenditure would not be deductible. The most important and significant example of such income is dividend income in the hands of companies. The implication of this, is that interest on debt used to finance the acquisition of shares by a company, would not be deductible, substantially increasing the cost of finance, as the income earned would be dividend income not classed as income in terms of the Income Tax Act.

The use of debt to finance acquisitions of companies is therefore severely restricted by the provisions of this section of the Income Tax Act. Although these provisions may, in some circumstances, inhibit the use of debt and consequently the issue of debentures, it is suggested without empirical evidence that this is not likely to have a significant impact on new issues of debt. Sound tax planning can in some circumstances avoid this problem. For example, the issue of debt to finance the acquisition of the company's actual assets as opposed to its shares may overcome this problem.

5.5 The Sophistication of Market Participants

This is a most subjective area to examine and cannot be empirically tested. To the extent that S.A. markets generally lag large foreign markets, such as those in the United States, the participants could be regarded as unsophisticated. However, in the South African situation, it is felt that conditions are different to those in the United States. The factors discussed previously all contribute to inhibiting the local market. The absence of investment bankers assuming the role of market-makers and finance raisers is attributable more to structural factors, such as the market's size and information availability, as well as the operational inefficiency of the market, rather than the lack of sophistication of participants. Activities of participants in the gilt market have shown that alhough they lag behind participants in foreign markets, their actions are nevertheless sophisticated.

5.6 Conclusion

This chapter identified several factors that should be considered in addition to those discussed in Chapters 3 and 4 that could inhibit the success of a corporate bond market. The impact of these factors may in some circumstances be significant, and are inter-linked with inhibiting factors identified in the previous chapters.

The level of prescribed assets and the nature of the prescribed asset requirements may, as suggested, inhibit the South African market's success. However, they are inter-linked with the factors inhibiting the operational and informational efficiency of the market. Similarly, to the extent that these requirements inhibit the market's tradeability, they also inhibit growth of the market. The market for corporate fixed income securities therefore remains small while the public sector market grows. As a result, size itself becomes a limiting factor.

The lack of tradeability and liquidity in the secondary debenture market also restricts the new issue market, as investors are reluctant to invest in securities that they may be unable to dispose of in the future.

Legal restrictions identified in this chapter are likely to place some restriction on the market's growth. Although these restrictions are likely to be insignificant at this stage their effect could be more significant should the debenture market and particularly the low-grade sector become larger.

In the final chapter of this report the results of these findings will be examined, together with the limitations of the report.

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CHAPTER 6

CONCLUSIONS, LIMITATIONS AND RESEARCH APPROACH

The final chapter of this report examines the results of the research completed in the previous chapters as well as its limitations and approach.

6.1 Limitations

The report dealt mainly with the U.S. corporate bond market. Although brief references were made to other non-South African markets, none of these were examined in any detail. The U.S. markets are the most sophisticated and well developed in the world and other foreign markets follow them. It was therefore felt appropriate that the U.S. markets and aspects of their structures be used as a guide to assist in explaining restrictions in the S.A. markets. In addition the vast majority of research done is on U.S. markets and the research into other foreign markets is limited.

The research conducted included no surveys, as the nature of the study did not facilitate this. The study was based on a market that is not well developed in South Africa, and of which most investors have very little knowledge and understanding. This, together with the nature of the analysis, did not lend itself to surveys.

A limited number of interviews were conducted and a list of those interviewed and questioned is provided at the back of the report. For the most part the knowledge and understanding of these people is limited. In addition numerous attempts were made to interview other people not listed, but there was a distinct reluctance on their part to be interviewed. This could be attributed to the fact that both parties interviewed and those not interviewed have a distinct bias towards gilts and semi-gilts and show little interest in debentures and their market. While in most cases their knowledge of gilts and semi-gilts was significant they had limited knowledge of the debenture market. This reluctance could be explained by the fact that these market participants felt the debenture market was of no real significance and was never likely to be an area of future potential.

Further areas that were not discussed or on which limited discussion took place have been specifically identified in the report.

6.2 Research Approach

Linked to the limitations identified in the above section is the research approach. During the course of completing the report it was necessary to adapt this approach to cope with these limitations.

The approach, as already explained, did not include surveys and only a limited number of interviews. These interviews were conducted on an informal basis and revolved around a discussion of the principle and aspects of the debenture market.

Data on gilts and semi-gilts trading activity and debenture par values and activity was analysed. For the most part this data was obtained by analysis and capture using Lotus 123 spreadsheets. This is presented in Appendices 1 and 2 at the back of the report.

The majority of the research took the form of a literature survey as the report's nature lent itself to examining the U.S. market and comparing its structure and nature to the S.A. market. A detailed analysis of these aspects was performed through a literature survey. In addition, factors that exist in the U.S. markets and do not exist in the S.A. market were identified and examined and their impact analysed through the use of empirical evidence based on the U.S. market.

Structural and legal restrictions on the South African market were identified during the course of the report and were developed on as to their possible impact. Suggestions as to the possible impact of these factors were made in the relevent sections. In considering these aspects of the report it was felt that these findings could not easily be proved by empirical analysis and in many cases the impact of restrictions could only be hypothesised.

6.3 Conclusions

The research of the previous chapters indicates clearly that the South African debenture or corporate bond market is not a well developed, successful market. Trade in this market is very thin and the number of transactions that take place is very limited. This has significantly restricted the participants in the market as shown by the factors identified in Chapter 2 and 4 which attract participants. As identified in Chapter 2 the growth of bond markets in the United States is a result of the attractive returns offered due to high interest rates and movements in these rates. The rate movements have providea opportunities to investors to make superior returns when able to trade in these fixed income securities.

While price movements and higher interest rates have attracted more participants they have been willing to enter bond markets with the knowledge that they could liquidate their portfolios easily at certain prices. In South Africa the gilts and semi-gilts markets have offered participants these opportunities. The size of the market has created a plentiful supply of scrip and the active market-making of certain issuers has guaranteed participants liquidity and marketability. For example trade in ESCOM stock has increased considerably as a result of ESCOM offering to buy and sell scrip in the market at guaranteed prices. This has not happened in the corporate sector or debenture market where participants experience extreme difficulty in liquidating holdings, even at prices significantly off those at which previous transactions took place. As a result, no traders participate in the debenture market and investors in this market are essentially buy and hold strategists. The absence of these traders from the market limits the participants and retricts growth considerably. Furthermore, their absence inhibits active and continuous trade and the demand and supply of scrip in the secondary market.

In the United States the growth of the corporate bond market and in particular the lower quality sector of the market can be attributed to the active participation of market-makers. Investment bankers have through market-making, together with operational and informational efficiency, created a highly successful secondary market for corporate bonds and, more recently, low-grade corporate bonds. This has attracted numerous investors to the market due to the attractive returns offered together with liquidity and marketability of these securities. This has also enabled issuers to raise finance more easily in the primary market and on an overall basis contributed substantially to this market's growth. The factors that have seen the growth of this sector of the corporate market are not present in the S.A. debenture market. There are no market-makers in the debenture market in South Africa and as explained above, this market is, as a result, illiquid. These inhibiting factors have also limited the ease with which new issuers can enter the primary market, as a limited number of investors are attracted to this market. The amount of existing scrip and new scrip available in this market is therefore severely limited.

The thin trade in the S.A. debenture market and the limited quantities of scrip have resulted in this market not being operationally efficient. The costs of moving into and out of the market are high as a result of each transaction having significant impact on security prices. The number of participants are further limited, as investors move to markets where their operating costs are lower. For example, participants enter the gilt and semi-gilt markets in South Africa and in particular the more traded sectors, as they can move into and out of these securities while incurring relatively low costs.

A further factor identified as important to the success of a financial market, is the market's informational or external efficiency. In the South African situation, a credit rating service providing information about the credit or default risk of a particular issue does not exist. In the report, default risk was identified as a major factor in the bond valuation process. While the information used in the rating process is available from other sources, the difficulties and costs involved restrict investors from performing these assessments. The absence of this information is therefore a major factor inhibiting the bond valuation process and securities may, as a result, not be fairly valued. The absence of fair values or the ability to determine fair values may result in the market being inhibited. Participants are reluctant enter markets where they are unable to establish whether security values are fair, under-valued or over-valued. This will further reduce participants in the market and as a result volumes will remain low and trading thin.

Linked to these factors are other structural factors such as the prescribed asset requirements. The removal of these restriction may provide investors (particularly institutional investors) with the opportunity to hold a broader portfolio of securities. A broader portfolio could include more investment in corporate debentures. This could result in more participants in the market and as a result more active trade, which could contribute to a more successful market. The privatisation of public authorities in South Africa may result in the phasing out or amending of prescribed asset requirements and as a result contribute to more active particpation in the debenture market.

The removal of other structural aspects, such as the restrictions imposed by S11(a) of the Income Tax Act and S38(1) of the Companies Act are likely to provide some assistance in increasing the market's attraction. It is however suggested that the impact of these factors is limited and would be of greater significance in a market that is already well traded and successful.

While market size is currently a restrictive factor, the creation of circumstances where the market is more successful will contribute to its growth. This would result in size becoming a less significant factor. The growth in the market, coupled with the increased marketability of these securities, would result in an increased number of traders entering the market. The combined effect of this would be to make the market more attractive to investors, traders and option writers thereby improving returns.

While the corporate bond markets in the United States and their participants may be considered very sophisticated when compared with the equivalent markets and participants in South Africa, this in itself is not a constraint. However this may be a factor causing the South African markets to lag behind those of the United States. A review of United States experience does however show that all bond markets have grown substantially over the past twenty years. Furthermore, activity in the corporate bond market has grown together with the government sector. In contrast, the South African debenture market has lagged behind the "gilt market" which has dwarfed it. The growth of the gilt market and the sophistication of activity, although lagging behind the U.S. markets, suggests that the corporate market is not lagging behind the U.S. market but is constrained by other factors inhibiting its growth. Therefore the lack of activity in the South African debenture market cannot be attributed to a lack of sophisticated participants as the growth and activity in the gilt market indicates that sophisticated participants do exist.

It is therefore evident that numerous factors limit the S.A. debenture market and it is suggested that the market does not simply lag behind overseas markets. A more successful corporate bond market is however likely to develop with the removal of restrictions such as prescribed asset requirements and the implementation of a bond rating service. In addition there [illegible] need for investment and merchant bankers to become more involve[illegible] market. A substantial participant such as an investme[illegible]nker performing the role of a market-maker would a[illegible] this market's growth. This will make it easier for issuers to rai[illegible]nce in this market and could see a greater number of debenture listings taking place.

It is however felt that the S.A. debenture market is unlikely to develop and grow rapidly in the next four to five years, as these restrictions are unlikely to be phased out quickly Furthermore, activity may take time to increase and the entrance of significant market-makers seeing potential in the market may take a long time.

LIST OF INTERVIEWS

Interviews were held with the following people between July 1987 and April 1988.

1. Ron Kippen - Menell, Jack Hyman and Rosenberg Inc.

2. Jonathan B. Rosenberg - Menell, Jack Hyman and Rosenberg Inc.

3. Burgett Oosthuizen - Standard Merchant Bank.

4. Innes Prinsloo - Finansbank.

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APPENDIX 1

DEBENTURES LISTED ON THE J.S.E DECEMBER 1987

DESCRIPTION	VOLUME TRADED	VALUE	MARKET CAPITALISATION
ABERCOM 13.75%	0	0	1 660 000
AECI 12.75% A	1 251 000	1 042 000	13 092 000
AECI 13.25% B	746 000	454 000	12 789 000
AECI 8.5%	189 000	144 000	1 219 000
AECI 10.25%	459 000	344 000	2 666 000
AECI 10.9%	2 690 000	1 905 000	30 000 000
AFRICAN OXYGEN 8.75%	1 313 000	1 126 000	4 266 000
AFROX FIN 11.1%	215 000	172 000	10 000 000
ANCHUSA 11.2%	521 000	339 000	7 500 000
ANGLO ALPHA 10.95%	2 865 000	1 720 000	15 000 000
ANGLO ALPHA 9.5%	845 000	559 000	12 000 000
AMCOAL 13.375%	1 885 000	1 829 000	13 600 000
AMPROP 10%	1 128 000	776 000	11 896 000
ANGLOVAAL 10.9%	600 000	433 000	20 000 000
ASEA 11.25%	320 000	249 000	5 000 000
ASSOL .2%	300 000	240 000	[illegible] 000 000
ASSOC FURN 8.5%	48 000	44 000	148 000
ASSOC FURN 10%	554 000	528 000	1 5[illegible]
ATKINSON OATS 10 [illegible]	3 060 000	2 809 000	
BARLOW RAND 13%	1 138 000	893 000	10 [illegible]
BARLOW RAND 13% A	2 531 000	2 182 000	29 0[illegible]
BARLOW RAND 10.9%	705 000	508 000	40 0[illegible]
BARPROP L STOCK	1 930 000	18 821 000	210 000
BARLOWS MIN 7.25%	558 000	434 000	2 500 000
BEARES 10.7%	87 000	234 000	4 520 000
BLUE CIRCLE 10.75%	1 100 000	754 000	5 000 000
BOUMAT 12.8%	0	0	200 000
BRICK AND CLAY 12.75%	145 000	130 000	357 000
BRICK AND CLAY 11%	47 000	40 000	557 000
CARLTON CNTRE 8.25%	2 136 000	1 539 000	23 774 000
CHEMICAL SERVICES 10.9%	2 220 000	1 863 000	5 000 000
CNA GALLO 9%	0	0	46 000
DORBYL 9.25%	355 000	258 000	8 000 000
DORBYL 13.25%	1 440 000	1 381 000	9 000 000
DORBYL 11.1%	1 850 000	1 448 000	12 000 000
DORBYL 12% C DEB	21 000	16 000	136 000
DORBYL 9.7%	1 448 000	1 150 000	7 335 000
DORBYL 10.75%	245 000	236 000	1 200 000
DORBYL 11%	100 000	1 000	10 000 000
DORBYL 12.25%	556 000	513 000	2 793 000
DORBYL 13.875%	835 000	817 000	5 395 000
DORBYL 5	532 000	520 000	3 607 000
EDGARS STORES 9.5%	510 000	460 000	1 760 000
EDGARS STORES 10.9%	1 350 000	1 008 000	10 000 000
FOSCHIN 11%	120 000	90 000	6 000 000
FRASERS 11.1%	1 562 000	1 167 000	4 500 000
GEN ELEC 11.2%	1 250 000	1 240 000	0
GENREC 11.2%	0	0	35 000
GENTIRE	2 000	2 000	6 000
GOLD FIELDS 13.75%	496 000	460 000	14 150 000
HAGGIE 10.75%	817 000	768 000	2 000 000
HAGGIE 13.25%	355 000	341 000	3 200 000
HULETTS ALUMINM 11.9%	2 120 000	1 639 000	10 000 000
IMP COLD STORE 9.55%	664 000	4[illegible] 000	6 400 000

APPENDIX 1 (CONT)

DEBENTURES LISTED ON THE J.S.E DECEMBER 1987

DESCRIPTION	VOLUME TRADED	VALUE	MARKET CAPITALISATION
IMP COLD STORE 14%	1 139 000	1 111 000	3 214 000
IMP COLD STORE 13.5%	19 000	15 000	3 339 000
IMP COLD STORE 12.4%	75 000	37 000	10 242 000
IMP COLD STORE 12.1%	1 650 000	1 537 000	7 758 000
JCI 9.75%	971 000	782 000	9 800 000
JHB TURF 5%	21 000	6 000	861 000
KAAPSE WYN 13.1%	908 000	870 000	9 000 000
KAAPSE WYN 11%	1 170 000	837 000	28 000 000
MALBAK 11.4%	0	0	20 000
MALBAK 11.2%	216 000	180 000	0
MALBAK 12.1%	575 000	465 000	50 000
MALBAK 11.2% N	5 000	343 000	6 000 000
METAL BOX 10.65%	605 000	366 000	12 000 000
METAL BOX 13%	49 000	47 000	3 002 000
M&R 12.6%	1 506 000	1 304 000	10 000 000
M&R 10.75%	0	0	4 360 000
M&R 10% O	0	0	0
M&R 10% N	0	0	1 884 000
NAMPAK 11.25%	420 000	324 000	14 495 000
NAMPAK 11.1%	1 109 000	1 014 000	5 505 000
O.K BAZAARS 13.5%	6 301 000	5 730 000	12 000 000
O.K.BAZAARS 11.4%	250 000	192 000	10 985 000
O.K. BAZAARS 11.2%	1 256 000	1 195 000	7 015 000
PLATE GLASS 11%	2 231 000	1 854 000	12 000 000
PREM GRP HLDS 12.6%	30 000	23 000	10 000 000
PREM GRP HLDS 13%	4 096 000	3 629 000	20 000 000
PPC 12%	4 480 000	3 494 000	10 000 000
PPC 12% OLD	0	0	0
RAND SELECT 10 %	6 201 000	7 004 000	17 068 000
REMBRANDT 11.1%	2 050 000	1 557 000	40 000 000
REX TRUEFORM 9.4%	318 000	26 000	1 200 000
REX TRUEFORM 11.2%	465 000	428 000	1 400 000
REX TRUEFORM 11.3%	855 000	706 000	3 000 000
ROMATEX 10.125%	108 000	99 000	1 200 000
SANSO KINE CENTRE 9.9%	343 000	230 000	8 666 000
SENTRAAL WES 13.55%	945 000	944 000	7 000 000
SENTRACHEM 13.8%	2 201 000	1 615 000	15 000 000
SENTRACHEM 10.1%	176 000	10 799 000	2 700 000
SOREC 8.25%	3 077 000	1 722 000	14 500 000
SOREC 9.2%	781 000	423 000	8 100 000
SOREC 13.375%	557 000	474 000	10 000 000
SAB 11.2%	7 405 000	5 460 000	5 000 000
SAB 13%	1 612 000	1 273 000	16 500 000
SAB 11% TO 16%	160 000	142 000	3 500 000
SA DRUGGISTS 11.4%	174 000	074 000	10 000 000
SA MANG 10.75%	545 000	426 000	11 355 000
SA MANG 9.85%	452 000	447 000	11 353 000
SA GASDIST 10.15 %	0	0	7 790 000
SA GASDIST 10.7 %	0	0	4 210 000
SA GASDIST 10.86 %	0	0	6 310 000
SA GASDIST 10.36 %	0	0	1 190 000
SA GASDIST 12.95 %	0	0	8 000 000
SOUTHERN SUN 12.125%	2 600 000	2 153 000	7 028 000
SA MANGANESE 10.75%	545 000	426 000	11 355 000

APPENDIX 1 (CONT)

DEBENTURES LISTED ON THE J.S.E DECEMBER 1987

DESCRIPTION	VOLUME TRADED	VALUE	MARKET CAPITALISATION
SA MANGANESE 9.85%	452 000	447 000	3 458 000
STEIN BROTHERS 13.5%	0	0	0
SUNCRUSH 11.75%	356 000	334 000	1 900 000
TIGER OATS 9.125%	321 000	247 000	20 000 000
TIGER OATS 10.85%	4 400 000	3 240 000	10 000 000
TIGER OATS 11.25%	1 231 000	952 000	10 000 000
TOMKOR 10%	4 000	233 000	1 400 000
TOMKOR 10% OLD	0	0	0
TONGAAT 13%	330 000	296 000	6 300 000
TRADEGRO 11.75%	0	0	40 000
TRADEGRO 11.75%	225 000	1 213 000	482 000
TRADEGRO 8.25%	120 000	11 000	0
TRANS NATAL COAL 13.25%	433 000	785 000	4 101 000
TRANS NATAL COAL 13.25%	4 000	14 000	197 000
TRENCOR 9.5 %	136 000	51 000	937 000
TRENCOR 11.1%	261 000	163 000	3 750 000
UN[illegible] CORP 13.15%	800 000	686 000	25 000 000
WE[illegible]RN DP LEVELS 12%	3 560 000	3 204 000	16 151 000
WOOLTRU 7%	2 000	1 000	150 000
WOOLTRU 13.5%	1 035 000	1 024 000	4 000 000
WOOLTRU 11.2%	1 133 000	878 000	6 000 000
TOTALS	123 669 000	133 945 000	1 212 972 000

SOURCE: THE JOHANNESBURG STOCK EXCHANGE MONTHLY BULLETIN - DECEMBER 1987

APPENDIX 11

10 MOST ACTIVE GILT AND SEMI-GILT ISSUES ON THE J.S.E FOR 4 MONTHS OF 1987

DESCRIPTION	MARCH 31. 1987 N/VALUE	DEALS	JUNE 30 , 1987 N/VALUE	DEALS	SEPTEMBER 30 1987 N/VALUE	DEALS	DECEMBER 31 1987 N/VALUE	DEALS	TOTAL VALUE N/VALUE	DEALS
R124 RSA 13% 2005	1 813 741	1 220	1 353 624	689	1 265 [illegible]	824	329 419	242	4 762 795	2 975
R059 RSA 10% 1991	1 515 128	379	614 752	242	-	-	-	-	2 129 880	621
E160 ESCOM 11% 2009	3 243 445	2 120	2 711 257	1 706	-	-	-	-	5 954 702	3 826
SV04 SATS 7.5% 2008	3 249 853	1 838	2 252 590	1 267	1 631 217	988	427 060	169	7 560 720	4 262
R116 RSA 14% 1992	412 320	173	-	-	488 000	199	-	-	900 320	372
E158 ESCOM 9.25% 1994	357 648	169	-	-	-	-	-	-	357 648	169
SV06 SATS 12.5% 1991	512 000	196	1 323 000	546	-	-	446 680	102	2 281 680	844
R121 RSA 11.5% 1990	402 011	149	-	-	-	-	-	-	402 011	149
E166 ESCOM 11% 1993	332 060	170	330 402	160	378 014	127	-	-	1 040 476	457
E158 ESCOM 9.25% 1994	357 648	169	-	-	-	-	-	-	357 648	169
R117 RSA 14% 1993	219 598	110	-	-	-	-	-	-	219 598	110
R131 RSA 14% 1995	-	-	359 389	61	-	-	-	-	359 389	61
R132 RSA 14% 1989	-	-	367 000	95	-	-	-	-	367 000	95
R117 RSA 14% 1993	-	-	417 473	174	-	-	-	-	417 473	174
R129 RSA 15% 1994	-	-	308 154	74	425 907	171	-	-	734 061	245
E168 ESCOM 11% 2009	-	-	-	-	4 763 290	2 987	2 081 577	1 337	6 844 867	4 324
E167 ESCOM 12% 2007	-	-	-	-	749 161	382	119 623	77	868 784	459
E165 ESCOM 11% 1995	-	-	-	-	400 695	147	-	-	400 695	147
E164 ESCOM 14% 1992	-	-	-	-	-	-	127 504	61	127 504	61
R134 RSA 14.5% 1993	-	-	-	-	400 638	120	-	-	400 638	120
R116 RSA 14% 1992	-	-	-	-	374 346	93	-	-	374 346	93
P006 P.O. 13% 1990	-	-	-	-	-	-	239 000	51	239 000	51
P001 P.O. 10% 2008	-	-	-	-	-	-	263 040	112	263 040	112
SV88 SATS 17% 1990	-	-	-	-	-	-	154 550	216	154 550	216
R128 RSA 15.5% 1990	-	-	-	-	-	-	144 080	28	144 080	28
NOMINAL VALUE 10 LARGEST ISSUES	12 415 452	6 693	10 037 641	5 014	10 877 279	6 038	4 332 533	2 395	37 662 905	20 140
TOTAL NOMINAL VALUE ALL ISSUES	15 171 136	9 253	13 150 937	7 233	13 905 431	8 037	4 993 720	3 1[illegible]7	47 221 224	27 650
% TOTAL CONSIDERATION	81,84%	72,33%	76,33%	69,32%	78,22%	75,13%	86,76%	76,59%	79,76%	72,84%

SOURCE: VALUATION OF GILTS AND SEMI-GILTS ON THE JOHANNESBURG STOCK EXCHANGE.