

**THE FINANCIAL PERFORMANCE OF OWNER-CONTROLLED AND
MANAGEMENT-CONTROLLED COMPANIES IN SOUTH AFRICA**

by

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ABSTRACT

Existing literature and theories related to the separation of ownership and control and its impact on companies' financial performance, including dividend payment have left this subject in state of ambiguity and unclearness, with various contradictions and inconsistencies being noted.

In order to establish whether there is a significant difference in financial performance between owner-controlled and management-controlled companies in South Africa, as a result of the separation of ownership and control, this study has used appropriate mathematical and statistical methods for data processing and analysis.

Results obtained from the study have revealed the existence of a significant difference in financial performance between owner-controlled and management-controlled companies in South Africa, as measured in terms of profitability, asset management, liquidity, leverage and dividend payment.

The analysis has indicated that management-controlled companies have been more efficient, more mature financially and paying higher dividends, out of earnings available to shareholders, than their owner-controlled counterparts.

Key terms :

Ownership; Control; Owner-controlled company; Management-controlled company; Financial management; Financial performance; Profitability; Asset management; Liquidity; Leverage; Dividend payment; Retention of earnings.

To

My beautiful wife Françoise N.T. Katompa

and

our wonderful children

Alain and Pamela Katompa

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CHAPTER 1

INTRODUCTION TO THE RESEARCH

1.1 BACKGROUND

According to the main body of finance literature, the financial performance of a company should not depend on its ownership structure, be it privately held, publicly held, owner-controlled¹ or management-controlled², since the primary management objective should be the maximisation of the shareholders' wealth, which is expected to govern the strategic vision and direction of the operations.

The reason why the maximisation of the shareholders' wealth should be considered as the primary objective of any manager has been explained by Le Roux, Venter, Jansen van Vuren, Kritzinger, Ferreira, de Beer, Hüber, Jacobs and Labuschagne (1995:178) in a financially simplified manner. According to them, when one invests capital in a company, thereby becoming owner or shareholder, his aim is to earn a certain return on his investment. It is therefore the company's responsibility to ensure that its shareholders or owners earn that return on their investment.

While for a listed company the maximisation of wealth can be described in terms of the market price of its ordinary shares, for a non-listed one this should be measured in terms of the return on the capital invested which should contribute to the increase in the company's value.

¹ An owner-controlled company is defined in this study as the one in which more than 50 % of the voting stock is held by its managers/executive directors (See subsection 1.4.2).

² A management-controlled company is defined in this study as a company in which ownership and control are separated. Managers are appointed by shareholders who do not participate in business decisions and operational control. (See subsection 1.4.3).

From a purely pragmatic point of view, it is believed that in a market economy everyone fares best in the long run when management puts shareholders first. With business being seen as the greatest engine of wealth in society, improving the commonweal is the real reason why maximising shareholders' wealth is so important¹.

According to Brigham and Gapenski (1990:5,6), however, the maximisation of the shareholders' wealth is not always the primary objective retained by all companies, as managers who drive the business are also interested in their own satisfaction, in employees' welfare and in the good of both their communities and societies at large. They are of the opinion that managers of large and well-entrenched companies, for example, could work to keep shareholder returns at a fair and reasonable level and then devote part of their efforts and resources to public service activities, to employee benefits, to higher executive salaries or to golf.

This view is also supported by Van Horne (1974:6) who states: "Maximisation of shareholders' wealth is an appropriate guide for how a company should act, but not necessarily how it does act."

It is evident that in pursuing financial goals, the objectives of the owner-managers and those of the non-owner managers cannot always be identical, which generally results in different strategies and therefore can also lead to a difference in the financial performance between owner-controlled and management-controlled companies.

The problem being researched in this study consists in establishing whether there is a significant difference in financial performance between owner-controlled and management-controlled companies in South Africa, due to the separation of ownership and control.

¹ This view is comprehensively explained by Al Ehrbar (1998:16).

This is expected to provide a better understanding of problems facing companies' management in South Africa and to facilitate the implementation of corrective actions if deemed necessary. Various questions concerning the equity investors' choice are also expected to be clarified.

A research of a *quasi*-similar nature was conducted on privately and publicly held companies in the United States in 1977 by R.F. Demong for the degree of Doctor of Business Administration at the Graduate School of the University of Colorado.

Scrutiny of the methodology used by Demong during the above mentioned research has revealed numerous weaknesses which could impact negatively on the research results as explained below.

Firstly, due to the fact the treatment sample consisted of private companies which converted to public companies, thereby being evaluated as privately held (with united ownership and control) for a period of three years prior to the initial issue and publicly held (with separated ownership and control) during the three years thereafter, the risk of data distortion had been found to be increased, as the researcher did not take into account the situations where certain converted companies could still be controlled by their owners who did not relinquish control after going public and hence retained the majority shareholding.

In this regard, it should be emphasised that the selling of shares is always the decision of the owners who, as controlling capitalists, wish to expand their companies and further interests. If these capitalists are rational and utility-maximising individuals, they will consistently wish to retain control.

This view is the one supported by Pitelis (1987:3) who states : “That capitalists will find it more beneficial to relinquish control is not self-evident and has not been demonstrated. That capitalists cannot expand and retain control appears implausible, given that in an ex-ante sense both the decision to sell shares and the extent to which shares are sold are the capitalists’ own decisions.”

As mentioned here above the research conducted by Demong did not consider the situations where owner-managers (capitalists) did not relinquish control during the three years period which followed the initial issue.

Secondly, the analysis of the same companies prior to going public as privately held and thereafter as publicly held, in order to generate conclusions in respect of their financial performance, could not ensure the effectiveness of control over external factors related to the changing socioeconomic environment, as companies have been evaluated under different periods. This was exacerbated by the fact that the shareholding structure of the publicly held companies, constituting the control sample, was not appropriately scrutinised and taken in consideration in the research design.

Finally, it has been noted that Demong’s research also failed to specifically analyse the main aspects of the difference in financial performance between privately held and publicly held companies, seen as a result of the separation of their ownership and control.

Apart from the above mentioned research, there is another issue which has been interestingly debated in the area of the separation of ownership and control and which cannot be ignored in this study. This issue concerns the managerial attitude towards risks associated with the business. In this regard, various theories have been developed, with most of them being found to be contradictory.

For example, when on the one hand Monsen and Downs (1965:225) and Baumol (1967:102) claim that: “Managers of management-controlled companies are more risk adverse than those of the owner-controlled ones”; Palmer (1973b:228) and Stano (1976:677) on the other hand hypothesise that: “Managers of companies with a diffused ownership will be willing to take more risks than those of owner-controlled companies.”

Although the above theories are conflicting with regard to the attitude of managers towards risks, depending on their relationship with the company (owners or non-owners), they still recognise that ownership and control can be dissociated, which can consequently affect the financial performance.

This view is totally rejected by those writers who argue that ownership and control will always stay together and partially by those who accept the separation but still believe that it does not have any impact on the company’s financial performance. More details in connection with theories formulated in the area of ownership and control are presented in the next chapter.

In terms of this research and considering the availability of required data, only industrial companies listed on the Johannesburg Stock Exchange have been selected for analysis and divided into two categories, namely owner-controlled and management-controlled, based on a scrutiny of their ownership structure. The company classification is fully explained in chapter 3 which covers the research methodology.

1.2 RESEARCH OBJECTIVES

In support of the assumption that objectives and goals of owner-controlled companies are different from those of management-controlled companies, one cannot disregard the existence of differences in their respective financial strategies and, since these strategies are considered as the manner in which the company is financed and operated and the pattern in which its funds are invested, it is deemed pertinent to believe that they will affect the financial performance, as measured in terms of profitability, asset management, liquidity, leverage and dividend payment¹.

The primary objective of this research is to establish whether there is a significant difference in financial performance between owner-controlled and management-controlled companies in South Africa, as a result of the separation of ownership and control.

Should it be established that there is a difference, the main aspects of the difference will be analysed so as to facilitate the implementation of corrective and value-adding actions where deemed necessary.

In addition, the study is intended to positively contribute to the theory of financial management of owner-controlled and management-controlled companies and provide the necessary clarification with regard to the various statements and assumptions related to the separation of ownership and control and its impact on the company's financial performance.

¹ The impact of the environment including financial strategies on the financial performance is explained by Le Roux et al (1995:79,182).

1.3 OUTLINE OF THE DISSERTATION

CHAPTER 1 :

This chapter is the introduction to the research. It provides the reader with the background to the problem being researched and specifies the objectives of the study, as presented in sections 1.1 and 1.2 above.

Subsequent to this dissertation outline, the chapter covers the definition of operational terms, the formulation of the research hypothesis, the presentation of the study importance as well as major limitations and key assumptions.

CHAPTER 2 :

Chapter two presents the review of existing literature in respect of the separation of ownership and control, the impact of this separation on the company's financial performance as well as on the dividend payment.

Various inconsistencies and contradictions which exist in this area are fully discussed.

CHAPTER 3 :

The third chapter covers the research methodology. It gives the description of the population covered by the study, explains the types and sources of the research data as well as the sampling strategies utilised.

The chapter ends with the explanation of the methods used for processing and analysis of data (hypothesis-testing), which include the pooled-variance *t* tests performed on two samples with numerical data.

CHAPTER 4 :

Using the research methodology as explained in chapter three, this chapter covers the hypothesis-testing as well as a comparative analysis of data (financial ratios) related to the financial aspects under scrutiny, namely, profitability, asset management, liquidity, leverage and dividend payment.

It should be remembered that the main purpose of the research design is to identify and analyse possible differences in financial performance between the owner-controlled and management-controlled companies in South Africa.

CHAPTER 5 :

This chapter summarises the results emanating from the research. It discusses the conclusions reached from the analysis of the research data and presents suggestions for further study.

1.4 DEFINITION OF TERMS

1.4.1 PRIVATELY HELD VERSUS PUBLICLY HELD COMPANY

A privately held company is a company generally owned by a few people and whose shares are not traded in the public market. It can also be called a private company. This is opposed to a publicly held company which is owned by the general public, including individuals and institutional investors and for which the stock is listed on an exchange and traded in the public market.

A publicly held company must file financial statements and reports with the Registrar and the Stock Exchange.

1.4.2 OWNER-CONTROLLED COMPANY

This study defines an owner-controlled company as the one in which more than 50 % of the voting shares are held by individuals who actively participate in the running of the business. These individuals are generally Managers (Executive Directors) of the company whose area of actions is not only limited to the definition of broad corporate objectives and taking of strategic decisions, but also includes tactical decisions which regulate the day-to-day business activities.

Both privately held and publicly held companies can be owner-controlled/managed.

1.4.3 MANAGEMENT-CONTROLLED COMPANY

A management-controlled company is considered as the one in which ownership and control are separated. Managers are appointed by shareholders who do not participate in business decisions and operational control.

In most instances, management-controlled companies are owned directly or indirectly (via other companies) by institutional investors, such as pension funds, insurance companies, mutual funds, which represent savings/interests of the general public.

1.4.4 FINANCIAL MANAGEMENT

According to Le Roux et al (1995:172) financial management refers to the management of the company's financial activities, with the financial manager being responsible for the effective planning, organisation, co-ordination, delegation and control of all the financial activities in the company as he strives to achieve the company's primary objective.

The role played by a financial manager is found to be extremely important since the effectiveness and efficiency of most operations are measured in financial terms.

Traditionally, financial management was seen as an activity within a company which focussed solely on obtaining or raising capital. In this approach, little or no attention was given to the company's daily problems regarding the financial function.

Contrary to the above, the modern approach to financial management is directed at both the raising and the application of funds, with the three basic decisions taken by the financial manager being delineated as follows :

- ◆ Financing decisions, covering the sources and forms of finance as well as the costs related to the financing of capital requirements;
- ◆ Investment decisions, including all the fixed and current assets of the company; and
- ◆ Dividend decisions, referring to the decisions which have been made with regard to the retention of earnings for re-investment and payment of dividends to shareholders.

1.4.5 FINANCIAL PERFORMANCE

Seen in the light of the financial management function as defined above, the financial performance of a company can be considered as the result of its management of the financing, investments (use of funds) and operations.

It is deemed important to mention that strategies adopted by management, incentives, dividend decisions as well as the socioeconomic environment in which a company operates are all the factors that can affect the financial performance. This being the case, a proper evaluation of the financial performance of a company due to its management's efforts must effectively control the impact of the socioeconomic conditions.

In this study, the financial performance of owner-controlled and management-controlled companies is evaluated through the analysis of specific financial ratios related to profitability, asset management, liquidity, leverage and dividend payment.

The selected financial ratios have been found able to facilitate a comprehensive evaluation of the financial performance of a company due to its management's efforts in the environment where the effects of the general economic and specific industrial conditions are adequately controlled. These financial ratios are reflected in Table 1.1.

FINANCIAL ASPECT	FINANCIAL RATIOS
1.PROFITABILITY	PROFIT MARGIN ON SALES
	RETURN ON TOTAL ASSETS
	RETURN ON EQUITY
2.ASSET MANAGEMENT	FIXED ASSET TURNOVER
	TOTAL ASSET TURNOVER
3.LIQUIDITY	CURRENT RATIO
4.LEVERAGE	TOTAL DEBT TO EQUITY
	TOTAL DEBT TOTAL ASSETS
	LONG-TERM DEBT TO TOTAL ASSETS
5.DIVIDEND PAYMENT	DIVIDEND PAY-OUT RATIO

Table 1.1 : Financial aspects and financial ratios.

Supporting the use of the financial ratios in a financial performance evaluation, Le Roux et al (1995:182) state : "During the process of analysis, financial performance is evaluated on the basis of specific norms. One of the methods used in these analyses is financial ratio analysis, which helps the financial manager to make certain deductions and conclusions regarding the financial position of the company."

Although, ratios analysis is found to be the most publicised and commonly used method of financial statements interpretation, since certain fundamental relationships of items in financial statements are emphasised by stating them in the form of ratios, it is deemed important to mention that the use of financial ratios is only significant when comparisons can be made, either between two different accounting periods for one company or between two companies or groups of companies, possibly providing the same service.

In this study, processing and analysis of data gathered for the evaluation of financial performance are undertaken through the use of appropriate mathematical and statistical methods, as explained in chapter 3 of this dissertation.

1.5 FORMULATION OF THE HYPOTHESIS

The basic research hypothesis is that there is a significant difference between the financial performance of owner-controlled and management-controlled companies in South Africa, as measured in terms of profitability, asset management, liquidity, leverage and dividend payment, using the relevant financial ratios.

Considering this research hypothesis, only an adequately structured and effectively conducted analysis of the selected financial ratios related to the above mentioned financial aspects can lead to its acceptance or rejection.

It should be noted that the null hypothesis which will be statistically tested in this regard is that there is no difference in financial performance between owner-controlled and management-controlled companies in South Africa, as measured in terms of profitability, asset management, liquidity, leverage and dividend payment, using the relevant financial ratios.

1.6 IMPORTANCE OF THE STUDY

In concluding his research on the financial performance of privately held and publicly held companies in the United States, Demong (1977:114) suggested that a study of the implication of the separation of ownership and control of small- to medium-sized companies be conducted in order to validate his findings.

Although Demong expressed the necessity of replicating a similar research, qualifying his work as the starting point for further study in the area of financial management of private companies, anomalies and weaknesses identified in his methodology justify the importance of analysing the financial performance of companies in which the ownership and control situation is not ambiguous.

In addition, in the management studies pertaining to ownership, control and ideology, Nichols (1969:13) states : “Quite obviously, we hope that further research will confirm our findings but we have sought to arrange the text so as to draw attention to the fact that the Northern City study is, and can only be the beginning.”

Due to existing theories in respect of ownership and control being inconclusive and in the majority of instances contradictory, this study is designed to enhance the body of the financial literature by providing the necessary clarifications in this area.

Furthermore, in analysing the financial performance of owner-controlled and management-controlled companies, including a scrutiny of the main aspects affected by the difference, should this exist, this study is expected to provide a better understanding of problems facing management of these two types of companies in South Africa and facilitate the implementation of corrective and value-adding actions where deemed necessary. It is also believed that it will assist equity investors in making intelligent investment decisions.

1.7 MAJOR LIMITATIONS AND KEY ASSUMPTIONS

This study is designed to establish whether there is a significant difference in financial performance between owner-controlled and management-controlled companies in South Africa, as a result of the separation of ownership and control and to analyse the main aspects of the difference, should it exist.

The analysis performed in this research is limited to specific financial ratios related to profitability, asset management, liquidity, leverage and dividend payment which are used as surrogates for the financial performance of companies under evaluation.

The study is not intended to determine the correlation between the financial performance measures and the companies' share prices as this falls outside the scope.

As mentioned in section 1.1, only companies listed on the Johannesburg Stock Exchange have been selected for this study and divided into two groups, namely owner-controlled and management-controlled, in terms of their shareholding structure.

The study covers the period from 1989 to 1995, thereby analysing the financial performance of the two groups of companies for seven years.

CHAPTER 2

REVIEW OF EXISTING LITERATURE

2.1 INTRODUCTION

Although various theories¹ have been formulated in the area of ownership and control, little has been done with regard to the evaluation of how the financial performance of companies can be affected by the separation of these two concepts.

Review of literature related to the separation of ownership and control highlights a number of inconsistencies and contradictions. For example, while certain economists and financial writers, such as the orthodox neoclassical economists, argue that ownership and control can never be separated, others like Mosen and Downs (1965) and Baumol (1967) claim that ownership and control are united in the owner-controlled companies and separated in the management-controlled ones.

In this chapter, theories rejecting the possibility of a separation between ownership and control (non-supporting theories) and those supporting that these two concepts can be separated (supporting theories) are examined.

It should be noted that the review of the supporting theories also covers the literature linking the separation of ownership and control to a company's financial performance as well as dividend payment.

¹ These theories include, *inter alia*, the *managerialism* of Berle and Means (1932), Dahrendorf (1957) and Burnham (1962) as well as various other theories on the separation of ownership and control, as referred to in this chapter.

2.2 NON-SUPPORTING THEORIES

There are economists, mainly the orthodox neoclassical, who are of the opinion that ownership and control can never be dissociated. These economists have based the argument on the fact that shareholders, even though not participating in the running of the company, have all right on their shares which they can sell should they be unhappy with the vision and orientation adopted by management, which means that they will always combine both ownership and control of the company.

With regard to this group of economists, Pitelis (1987:11) states : “Consistent with their focus on <consumer sovereignty>, orthodox neoclassical economists largely ignored the possibility of the separation of ownership from the unity of ownership and control.”

In general terms, the view expressed by the orthodox neoclassical economists, such as Solow (1967), is that all shareholders are in control of the companies, as they have the ability to sell their shares and possibly move to another company whose policies are closer to their preferences, thereby ensuring that the companies they own respect always their requirements.

It is, however, not self-evident that shareholders will simply sell their shares and move to another company should they be unhappy with management, as there are many reasons which can stop them from doing so. These reasons include, *inter alia*, transaction costs, tax disadvantages as well as the uncertainty and volatility of the shares markets, which can generate substantial shareholders' costs if shares are sold when the market is low.

Rejecting the possibility of separation between ownership and control, some have furthermore supported that managers will never diverge from the profit maximisation objective which is also the objective of shareholders as the stock market can put a low valuation to the company's assets, thereby tempting another management to take-over.

But how can one be able to establish whether higher executive salaries and other incentives schemes are implemented with a view to attracting and retaining excellent managers, who in turn will strive for profit maximisation ? Is it possible to establish whether a particular management team is trying to keep shareholders satisfied while pursuing other goals ? All these questions have not been clearly answered by those who have so far tackled the problem.

Besides the above discussions, a further issue which has been widely debated under the ownership and control literature to emphasise shareholders' primacy is the Agency relationship, defined by Jensen and Meckling (1976:305-360) as being : "A contract under which one or more people (the principals) hire another person (the agent) to perform some service on their behalf, and delegate some decision-making authority to the agent."

The aspect of the agency relationship which is deemed relevant to this study concerns the relationship between shareholders and managers of management-controlled companies. In terms of this relationship, various mechanisms which can be used by shareholders to force managers to act in their best interests have been identified. These include, *inter alia*, the threat of firing and takeover.

In their analysis of the threat of firing situation, Brigham and Gapenski (1990:11) support that the institutional money managers currently have the clout, if they choose to use it, to exercise considerable influence over a company's operations, as stock ownership is being increasingly concentrated in the hands of large institutions rather than individuals. In their view, the probability of a large company's management being ousted by its shareholders was so remote in the past that it posed little threat. This could be ascribed to the fact ownership of most large companies was so widely distributed, and management's control over the proxy mechanism was so strong, that it was almost impossible for dissident shareholders to gain enough votes to overthrow the managers.

Although Brigham and Gapenski assume in these circumstances that shareholders are able to force managers to respect their preferences, one can still question the correctness of this statement, as institutional money managers referred to are just representatives of the investing institutions and cannot be considered as the ultimate shareholders. It should be noted that in the case of pension funds, for example, the ultimate shareholders who are usually wage earners do not have knowledge of the ownership claims on the shares bought by their funds.

Another writer who has paradoxically claimed that ownership and control cannot be separated is Burnham whose theory has been based on the premise that managers have become the ruling class combining both ownership and control.

In this regard, Burnham (1962:91) states : “If there is no control, there is no ownership... If ownership and control are in reality separated, then ownership has changed hands to the control and the separated ownership is a meaningless fiction.”

Burnham’s theory has been heavily criticised by numerous economists, with some pointing out that the author has suffered from a trained incapacity to dissociate the concept of control from that of ownership¹.

Contrary to non-supporting theories, the implication of this study is that ownership and control can be separated, which can lead to companies being classified either as owner-controlled or management-controlled.

¹ This view has been expressed by Nichols (1969:35) who, in addition, has labeled Burnham’s theory nonsensical.

2.3 SUPPORTING THEORIES

2.3.1 OWNERSHIP-CONTROL AND FINANCIAL PERFORMANCE

Although all the theories reviewed under this section support that ownership and control are combined in the owner-controlled companies and dissociated in the management-controlled ones, their conclusions with regard to the impact the separation of these two concepts has on the financial performance are not identical.

Considering that managers of all types of companies, owner-controlled or management-controlled, are operating in a competitive environment, it is generally assumed that they will be forced to undertake actions that are reasonably consistent with the maximisation of the wealth of shareholders. This reasoning is the one given by those economists who are of the opinion that companies' shareholding structure cannot affect their financial performance, as both propertied and non-propertied managers have similar goals and objectives in respect of growth, profit maximisation as well as their own satisfaction.

In this regard, Nichols (1969:149-150) states : "We accept that the non-propertied director may derive satisfaction from increasing his company's share of the market and from pursuing various forms of growth policy which are not necessarily tantamount to maximisation of the shareholder interest, but we suspect that similar managerial policies might also be pursued by modern propertied directors."

It is deemed important to mention that Nichols has remained sceptical about the extent to which a difference can exist between the profit utilisation policies of modern owner-controlled and management-controlled companies and has supported that all managers or executive directors would have an element of moral concern for the interests of the shareholders.

The above theory is rejected by economists such as Jensen and Meckling (1976) who have argued that the separation of ownership and control leads to financial objectives and strategies developed by the owner-managers being dissimilar from those adopted by non-owner managers, which consequently results in the difference in financial performance between owner-controlled and management-controlled companies.

In the management-controlled companies, for example, due to managers not having the same relationship to the private property as owner-managers, it is *ipso facto* supported that there is a significant difference in the nature of the profit goal and the degree of responsibility with which economic power is exercised.

It is not surprising to emphasise that amongst the writers who have expressed the view that the separation of ownership and control does affect the financial performance of companies, various contradictions have also been identified.

These contradictions are mainly prevalent in the area dealing with the managerial attitude towards business risks as well as the effectiveness and efficiency of their decisions in running their companies. The examples of contradicting theories related to the risk-taking attitude as mentioned in chapter one is worthy of note, with Monsen and Downs (1965:225) and Baumol (1967:102) supporting that managers of management-controlled companies are more risk adverse than those of owner-controlled companies, whereas Palmer (1973b:228) and Stano (1976:677), are of the view that managers of companies with a diffused ownership will be willing to take more risks than those of owner-controlled companies.

Furthermore, while certain have tried to demonstrate that management-controlled companies are less profitable than the owner-controlled ones, others have hypothesised the opposite and have strongly supported that profitability of management-controlled companies is better than that of owner-controlled companies.

Supporting Mosen and Downs' theories and assuming that management-controlled companies are less profitable than the owner-controlled ones, Shelton (1967), using the 'x-efficiency' factor of Leibenstein (1966), found that owner-managers were more productive than non-owners.

In addition to Shelton's findings, Furubotn and Pejovich (1972) broadly theorised that the managers of a non-owner controlled company might pursue goals other than that of the maximisation shareholders' wealth (long-run profits).

Jensen and Meckling (1976) who have expressed the same view have been more specific than their predecessors and have justified their position by assuming that managers of the management-controlled companies would likely divert a certain level of returns of the company to such items as air conditioning, carpets and other non-pecuniary benefits for themselves.

In the light of the above, it is clear that the majority of arguments held against management-controlled companies lie on the so called risk of mismanagement, perceived as the result of managers of these companies being responsible of other people's funds than of their own, which means that they cannot manage them more effectively and efficiently than the owners.

However, that owner-controlled companies are more profitable than management-controlled companies has not been so far proven to be true using a consistent scientific or bias-free statistical methodology. It is deemed unwise to support that the profit rate of management-controlled companies is lower than that of owner-controlled companies based on groundless statements, such as the one given by Jensen and Meckling.

How can one prove that only managers of management-controlled companies can spend money on items, such as air-conditioning, carpets and pecuniary benefits for themselves ?

On the opposite side, other economists have tried to demonstrate that the risk of spending company's funds on luxurious items is more prevalent in the owner-controlled companies than it is in the management-controlled ones, as propertied-managers are perceived as those who will do whatever they can to improve their own welfare.

According to Brigham and Gapenski (1990:9), for example, if a company is a proprietorship managed by the owner, it can be assumed that the owner-manager will take every possible action to improve his own welfare, with welfare measured primarily in the form of increased personal wealth and more leisure or perquisites, such as luxurious offices, expense accounts, the use of corporate planes and yachts, and personal assistants.

It is believed that potential risk of mismanagement which could be associated with the management-controlled companies has been nowadays adequately controlled by a general public scrutiny, including good corporate governance regulations, corporate conscience as well as a public consensus.

Furthermore, due to the fact that non-propertied managers are in general more qualified and more competent than the propertied managers who owe their positions to their ownership rather than anything else, it can be assumed the companies they run (management-controlled companies) will always have better financial performance than those controlled/managed by their owners.

This view is the one supported by Dahrendorf whose managerial theory, as summarised by Nichols (1969:42), stipulates : "A new class of managers had emerged to replace the old owner-managers. These managers are bureaucrats who owe their position to their managerial ability instead of property ownership."

The different social background, training, and experience of the non-propertied managers are considered as the factors which make them both think and act differently from their predecessors (the owner-managers or capitalists).

Logically, it can be expected that non-owner managers who are in possession of the required skills, expertise and qualifications should conduct their companies more, not less profitably than the owner-managers who, in the majority of instances, owe their positions to their ownership.

2.3.2 OWNERSHIP-CONTROL AND DIVIDEND PAYMENT

Similarly to the situation described in the section above, review of the existing literature related to the separation of ownership and control and dividend payment has revealed the existence of contradicting opinions as far as the retention of earnings for re-investment and payment of dividends to shareholders are concerned.

For example, when on the one hand the view expressed by Marglin (1975) is that managers of management-controlled companies favour low dividends, with Hilferding (1981) claiming from his side that owner-managers will always prefer high retention ratios, Nichols (1969), on the other hand, has been of the opinion that the preference for dividend distribution is not fully served by either management- or owner-controlled companies.

Supplementary to Marglin's argumentation, Pitelis (1987) has sought to attribute the preference for a low dividend and high retention by non-owner managers to the fact that plough-back, on top of eliminating the risks associated with external borrowing, does not have any restrictive impact on their consumption.

In this regard, Pitelis (1987:32) states : “As managers are assumed not to own shares, they are not required to consume less when there is an increase in the retention ratio... It follows that non-owner managers prefer higher retention ratio to that favoured by shareholders.”

With regard to the view expressed by Hilferding (1981), it is deemed important to mention that his theory has been found to be akin to the Marxist tradition, which claims that owner-controlled companies will always pay lower dividends than management-controlled companies, as owner-managers who are capitalists have to deal carefully with the competition that exists between them and financial capitalists.

It is evident that borrowing from financial institutions is often associated with the risk of industrial capitalists losing their control to financiers. For this reason, the retention of earnings can be considered safer and more desirable for industrial capitalists than external borrowing. Quite obviously, non-owner managers do not have the same risk.

The Marxist theory in respect of capital accumulation as presented by Pitelis (1987:44) stipulates : “A capitalist who fails to compete in the above framework (with their workers and with their fellow capitalists) is sooner or later a non-capitalist. The survival of those left depends upon their ability to compete successfully. In the above sense competition ensures that capitalists will tend to accumulate.”

The above argumentation also applies to the issuing of new equity which might result in owner-managers losing their control on the companies they own in majority and manage.

In fact, it is evident that a decision by the owner-managers to pay a low dividend and retain a large proportion of earnings for re-investment will have a smaller-scale impact when compared to management-controlled companies in which the majority of shares are directly or indirectly owned by outside investors.

As mentioned by Brigham and Gapenski (1990), many shareholders rely on dividends to meet their expenses and will be inconvenienced should the dividend stream be unstable. Moreover, due to the fact that a reduction of dividends to make funds available for investment can send incorrect signals and drive down the share price, it is preferable for a company wishing to maximise its share price to balance its internal needs for funds against the needs of its shareholders.

To support their position in respect of shareholders' preference for dividend and to stress the impact a dividend payment has on the share price, Brigham and Gapenski (1990:428) state: "It has been observed that an increase in the dividend is often accompanied by an increase in the share price, while a dividend cut generally leads to a share price decline. This could suggest that investors, in the aggregate, prefer dividends than capital gains."

Apart from all the above theories, further disagreements have been noted in respect of dividend policy, with the main conflicting arguments being elaborated by Modigliani and Miller (1961), Gordon (1963) and Lintner (1962) and Litzenberger and Ramaswamy (1979) as explained below.

According to Modigliani and Miller, no optimal dividend policy exists, with one policy being as good as any other. This theory has been based on the premise that dividend policy does not affect the value of the company or its cost of capital; reason why it has been considered irrelevant. This position was theoretically proven under unrealistic conditions, assuming that personal and corporate income taxes as well as transaction and flotation costs do not exist; that dividend policy does not have an impact on the company's cost of equity and capital investment policy; and that investors and managers have the same set of information regarding future investment opportunities. Considering that the above assumptions do not hold precisely, the validity of the conclusions reached by Modigliani and Miller has been found to be questionable.

Contrary to the dividend irrelevance theory, Gordon and Lintner have argued that dividends are less risky than capital gains and that, in order to maximise its value, a company should set a high dividend ratio and offer a high dividend yield. Their view is that the cost of equity increases as the dividend pay-out is reduced, as investors are more sure of receiving dividend payments than the income from capital gains. This theory has been rejected by Modigliani and Miller, calling it “the bird-in-the-hand fallacy”.

A further rejection of the theory formulated by Gordon and Lintner came from Litzenberger and Ramaswamy who have supported that investors should require higher rates of return on stocks with high dividend yields, since dividends are effectively taxed at higher rates than capital gains. According to them, a company should pay a low or no dividend in order to maximise its value.

Form the above, it is deemed important to note that dividend policy decisions cannot be based on precise mathematical models but should indeed be linked to the shareholders’ needs for current income as well as the needs for future growth.

2.4 CONCLUSION

From the review of existing literature in respect of the separation of ownership and control as well as the financial performance of owner-controlled and management-controlled companies, a variety of contradictions, inconsistencies, including inconclusive assumptions have been highlighted.

A number of theories rejecting the possibility of a separation of ownership and control have been examined, with the basis of their argumentation being also scrutinised.

Although several economists, as demonstrated in this chapter, have supported that ownership and control are separated in the management-controlled companies, their opinions with regard to the financial performance of this type of companies compared to that of the owner-controlled ones, including the policy in respect of the retention of earnings for re-investment and dividend payments, are found to be contradictory.

In the light of this review, it is evident that theories and literature related to the impact the separation of ownership and control has on the financial performance of different types of companies are in state of unclearness and ambiguity.

The implications of this study are that ownership and control are separated in the management-controlled companies and combined in the owner-controlled ones and that the use of an appropriate analytical tool can help determine how the financial performance is affected by the combination or the separation of these two concepts.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

As demonstrated in previous chapters, existing theoretical and empirical studies have failed to provide consistent and clear answers to the questions related to the separation of ownership and control and its impact on the financial performance of owner-controlled and management-controlled companies. This research is expected to provide the necessary clarifications in this area as far as South African listed companies are concerned.

While it is evident that part of an adequate data analysis is to understand the assumptions underlying each of the hypothesis-testing techniques and to select the best suited for a given set of conditions, other criteria for test selection include the simplicity of the procedure, the ability to generalise the conclusions to be drawn up, the availability of computer software packages that can facilitate test procedure, the accessibility of tables reflecting the critical values for the test statistic as well as the statistical power of the procedure itself.

In order to successfully test the hypotheses formulated in section 1.5 (chapter 1) of this study, various statistical techniques and procedures have been evaluated, with a view to determining the most appropriate, aimed at ensuring the validity of conclusions to be generated during the examination of differences in financial performance between owner-controlled and management-controlled companies.

This chapter covers the methodology applied in the research. It describes the population under scrutiny, explains the sources and types of data to be analysed, the adopted sampling strategies as well as the data processing and analysis techniques, including hypotheses testing.

3.2 DESCRIPTION OF THE POPULATION

The population covered by this study consists of South African companies listed on the industrial sector of the Johannesburg Stock Exchange. In this research, the population will be divided into categories, with the first (population 1) being constituted by the owner-controlled companies and the second (population 2) by the management-controlled ones.

The selection of industrial companies is motivated by the availability of the research data which have been found to be fully reflected in their published financial statements and various other reports.

It is deemed important to mention that the financial and mining sectors have been excluded due to their inability to comply with the study requirements, either by the absence of the necessary information in respect of the financial aspects being analysed or by the fact that they are dominated by management-controlled companies.

3.3 SOURCES AND TYPES OF DATA

Data used in this analytical study have been obtained from the Listing Division of the Johannesburg Stock Exchange, the JSE Handbooks (from 1988 to 1996) published by Fresh Financial Publications as well as the Investors' Guides issued by the Investors' Group during the same period. In certain instances, recourse has been made to individual company annual reports.

All these sources have been simultaneously utilised in order to ensure the accuracy, validity and completeness of data to be processed and analysed.

It should be noted that data received from the above mentioned sources are considered as raw data, used to compute the required financial ratios which in turn are processed with a view to obtaining the analysable statistical parameters (variables) for both owner-controlled and management-controlled companies during the period under evaluation.

These research variables exist in the form of numerical data and should be interpreted by means of appropriate mathematical or statistical procedures.

3.4 SAMPLING STRATEGIES

This research is an analytical and comparative study using two samples. While the first sample represents the owner-controlled companies listed on the Johannesburg Stock Exchange from 1989 to 1995 (the research period), the second comprises the management-controlled companies which were similarly listed during the same period.

The two samples have been randomly selected from the two categories of companies, via a research database, which has been established and treated with a view to eliminating the risk of potential biases in the results, thereby ensuring the validity of conclusions to be generated, as explained in the following subsection.

It should be noted that the need for a research database is justified by the requirement in terms of which companies to be analysed must have operated as listed companies throughout the research period. This requirement has been dictated on the one hand by data availability and on the other by the need to ensure the accuracy, validity and completeness of processing. In this study, the research database is established using a modern mathematical approach.

3.4.1 ESTABLISHMENT OF THE RESEARCH DATABASE

Based on data obtained from the industrial sector of the Johannesburg Stock Exchange and using a modern mathematical approach, as illustrated below, two sets of elements (set A and set B) have been constituted and captured on the computer system, using COREL QUATTRO PRO 7, in order to establish the research database.

The elements contained in set A are all the industrial companies which were listed as at the beginning of the first year of the research period (1989). These companies are represented in the illustration as elements *a*, *b*, *c*, *d*, *e* and *f*.

With regard to set B, the constituting elements are all the industrial companies which were listed as at the end of the last year of the research period (1995). These companies are represented as elements *d*, *e*, *f*, *g*, *h* and *i*.

Mathematically stated, the two sets are as follows :

$$\text{Set A} = \{a, b, c, d, e, f\} \text{ and}$$

$$\text{Set B} = \{d, e, f, g, h, i\}.$$

Due to the fact that the study covers only companies which at least have operated as listed companies from 1989 to 1995, the modern mathematical procedure used to create the research database is "*the intersection*" between the two sets of elements.

This intersection consists of elements (companies) which have been found in both set A and set B, as illustrated in Figure 3.1.

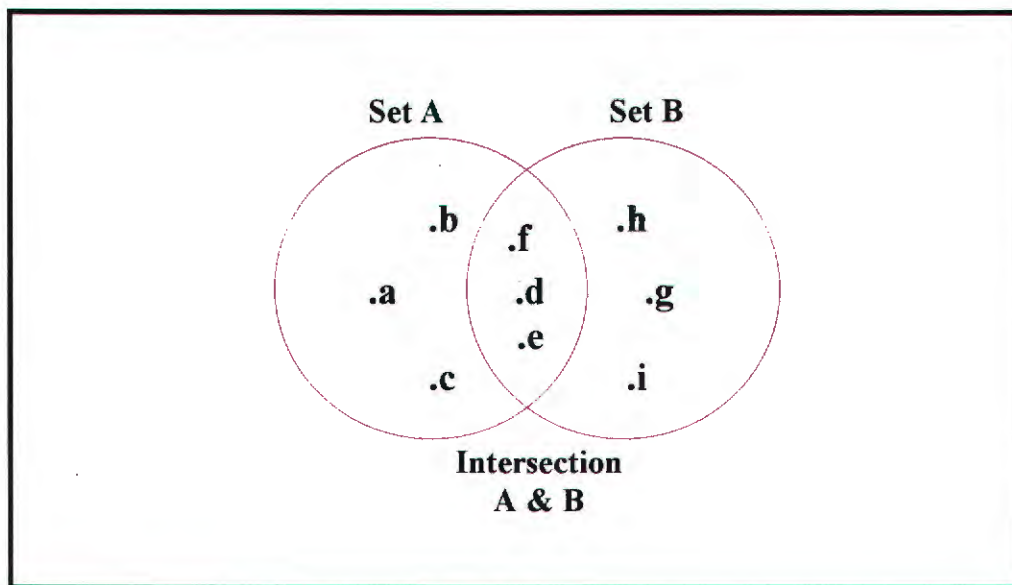


Figure 3.1 : Intersection between set A and set B.

Writing about set operations, Neter, Wasserman and Whitmore (1982:708) give the following definition : “For any pair of sets A and B, $A \cap B$ denotes the set of all elements that belong to both A and B, and is called their *set intersection*.”

In this illustration, the intersection between set A and set B can mathematically be presented as follows :

$$A \cap B = (d, e, f)$$

The fact that *a*, *b* and *c* are not included in the intersection, as a result of their absence from set B, means that these elements (*a*, *b* and *c*) represent companies which were delisted during the period. Using the same logic, the absence of elements *g*, *h* and *i* in set A and consequently in the intersection reveals that the elements *g*, *h* and *i* represent companies which were not listed as at the beginning of the research period.

In the light of the above, it is obvious that elements *d*, *e* and *f* which are in both set A and set B and are therefore included in the intersection represent companies which have operated as listed companies throughout the study period and constitute the research database.

3.4.2 CLEANSING AND DISCARDING OF ANOMALIES

Taking into account the *GIGO* principle (garbage in, garbage out), it is deemed important to review all the data pertaining to companies included in the research database in order to eliminate those found to be incomplete, inappropriate or unrelated to the study.

Cleansing and discarding of anomalies form an important phase in the research process, as they clear the ground for a smooth organisation and presentation of data, thereby facilitating effective processing and analysis.

In terms of this study requirements, the following companies have been discarded from the research database :

- companies which operate abroad but have been listed on the Johannesburg Stock Exchange;
- companies with Headquarters outside South Africa;
- companies for which information in respect of shareholding is missing or is not clearly reflected;
- companies which changed from one type to another during the study period (i.e. from owner-controlled to management-controlled and vice-versa);

- companies for which the necessary financial data are missing; and
- companies with financial data in currency other than the South African Rand.

3.4.3 CLASSIFICATION OF COMPANIES

Subsequent to the cleansing and discarding of anomalies, information related to the shareholding for the remaining companies has been meticulously scrutinised year-by-year throughout the research period to facilitate company categorisation, as follows :

Where Managers/Executives have kept more than 50 % shareholding from 1989 to 1995, companies have been classified as “owner-controlled”. On the other hand, companies owned by pension funds, insurance companies or other large companies and in which Managers/Executives are not shareholders have been termed “management-controlled”.

From this classification, only two categories of companies emerge; the first comprising the owner-controlled companies and the second the management-controlled ones.

3.4.4 SAMPLES SELECTION AND MATCHING

Tables 3.1 and 3.2 reflect respectively the list of owner-controlled and management-controlled companies constituting the two random samples analysed in this study and which have been matched according the standard industrial classification (SIC).

The first sample, called Group A, has been randomly selected from the category formed by owner-controlled companies. Similarly, the constitution of the second sample, called Group B, has been also based on a random selection performed on management-controlled companies, with the standard industrial classification being used to match companies extracted from this group with those included in the first sample.

The matching of the two samples is found to be a compulsory requirement, as it facilitates an adequate and effective control over inter-industry variances, thereby ensuring the accuracy and validity of the analysis.

COMPANY	CREATION YEAR	LISTING YEAR	MINIMUM % OF SHARES HELD BY MANAGEMENT
ARIES PACKAGING	1981	1987	60
STOCKS & STOCKS HOLDINGS	1945	1988	72
GENERAL OPTICAL	1924	1951	66
COMBINED MOTOR	1965	1987	68
SONDOR INDUSTRIES	1948	1987	53
SCHARRGHUISEN	1969	1987	66
TITACO/BATEMAN PROJECTS	1982	1987	52
CLYDE INDUSTRIAL	1919	1987	90
BRENNER MILLS	1987	1987	80
GLODINA	1986	1987	70
NINIAN AND LESTER	1936	1969	53
PALS HOLDINGS	1937	1987	58
ADVANCED TECHNICAL SYSTEMS	1975	1987	54
AROMA	1987	1987	75
ARTHUR KAPLAN	1973	1987	69
PICK'N PAY STORES	1968	1969	52
MICOR INDUSTRIAL	1955	1987	59
NICTUS	1964	1969	72
BOLTON INDUSTRIAL HOLDINGS	1886	1947	63
CARGO CARRIERS	1959	1987	76
TIGER WHEELS HOLDINGS	1967	1987	61

Table 3.1 : Owner-controlled companies (Group A).

COMPANY	CREATION YEAR	LISTING YEAR	PRINCIPAL SHAREHOLDERS
COATES BROTHERS	1936	1967	COATES
LTA	1889	1965	AMIC
ADCOCK	1890	1949	TIGER OATS
TOYOTA	1961	1964	WESCO & TOYOTA
CHUBB HOLDINGS	1950	1973	CHUBB
HAGGIE	1950	1979	AMIC & MALBAK
METKOR	1968	1969	IND. AND MINING INVESTMENT
AFRICAN OXYGEN	1927	1964	BOC HOLDINGS
OCEANA FISHING	1918	1947	CG SMITH
STERLING CLOTHING	1932	1988	SA EAGLE
CONSHU HOLDINGS	1968	1987	SAB
ROMATEX	1920	1944	CG SMITH
REUNERT	1888	1948	BARLOW
CLICKS GROUP	1968	1979	SCORE CLICKS HOLDINGS
WOOLTRU	1936	1936	SA MUTUAL
EDGARS	1946	1946	SAB
MURRAY & ROBERTS HOLDINGS	1948	1968	SANKORP
PLATE GLASS	1897	1947	PLACOR
IMPERIAL HOLDINGS	1946	1989	SA MUTUAL
UNITRANS	1962	1987	SANKORP
METAIR	1948	1949	WESCO

Table 3.2 : Management-controlled companies (Group B).

3.5 METHODS OF DATA PROCESSING AND ANALYSIS

Data obtained directly from the various sources mentioned in section 3.3 of this chapter are of a such unprepared nature that they cannot meaningfully be used in this type of research. Therefore, they require a series of preliminary treatments and organisation which can facilitate the computation of the appropriate research variables to be analysed.

All the mathematical and statistical techniques utilised in the computation of the research variables, starting by the calculation of the required financial ratios which have been used to compute the necessary statistical parameters are explained below. This explanation is followed by the description of both the selected hypotheses-testing procedure and the comparative/ empirical analysis pattern.

3.5.1 RATIOS CALCULATION

In this study, the evaluation of the financial performance of the owner-controlled and management-controlled companies in South Africa is performed through the analysis of variables emanating from the selected financial ratios.

Due to data collected not being in a ratio format, it has been deemed imperative to apply the appropriate financial formulas to the relevant balance sheets and income statements data in order to obtain all the required ratios per company and per year.

The ratios calculation has been performed using the COREL QUATTRO PRO 7 software which was also used to establish the research database, to effect the cleansing and discarding of anomalies and to categorise selected companies. The two research samples together with all the relevant financial data are stored in this application.

With all the data being already captured and stored on the system, the appropriate financial formulas defining the input fields for each financial ratio have been specified in the corresponding output field to facilitate accurate and complete processing. The output field name is followed by two digits which represent the corresponding financial year.

Financial formulas used to determine the required ratios are reflected in Table 3.3.

FINANCIAL ASPECT	FINANCIAL RATIO	OUTPUT FIELD NAME	FORMULA UTILISED
1.PROFITABILITY	PROFIT MARGIN ON SALES	«PRMS(yy)»	(NET INCOME ÷ TURNOVER)*100
	RETURN ON TOTAL ASSETS	«ROTAS(yy)»	(NET INCOME ÷ TOTAL ASSETS)*100
	RETURN ON EQUITY	«ROEQ(yy)»	(NET INCOME ÷ COMMON EQUITY)*100
2.ASSET MANAGEMENT	FIXED ASSET TURNOVER	«FASTR(yy)»	TURNOVER ÷ FIXED ASSETS
	TOTAL ASSET TURNOVER	«TASTR(yy)»	TURNOVER ÷ TOTAL ASSETS
3.LIQUIDITY	CURRENT RATIO	«CURAT(yy)»	CURRENT ASSETS ÷ CURRENT LIABILITIES
4.LEVERAGE	TOTAL DEBT TO EQUITY	«DE/EQ(yy)»	(TOTAL DEBT ÷ EQUITY)*100
	TOTAL DEBT TO TOTAL ASSETS	«TODAS(yy)»	(TOTAL DEBT ÷ TOTAL ASSETS)*100
	LONG-TERM DEBT TO TOTAL ASSETS	«LTDAS(yy)»	(LONG-TERM DEBT ÷ TOTAL ASSETS)*100
5.DIVIDEND PAYMENT	DIVIDEND PAY-OUT RATIO	«DIVPY(yy)»	DIVIDEND ÷ EARNING PER SHARE

Table 3.3 : Financial ratios and their formulas.

3.5.2 PRESENTATION OF RESEARCH VARIABLES

In order to obtain the research variables per year and for each of the two samples throughout the research period, all the financial ratios calculated via COREL QUATTRO PRO 7, as explained in the previous subsection, have been subjected to a descriptive statistics treatment.

Descriptive statistics are defined by Berenson and Levine (1998:4) as : “Those methods involving the collection, presentation and characterisation of a set of data in order to describe the various features of that set of data.”

It should be noted that these methods are used in this study to calculate a variety of statistical parameters/variables, including mean, median, standard error, standard deviation and variance. This calculation has been performed per ratio, per year and for each sample. Results from descriptive statistics are reflected in Annexure A1 to A5.

Subsequent to this statistical treatment, all the obtained mean values (per ratio) have been extracted from each sample and presented in a single table reflecting years in columns and samples in rows, with a view to facilitating the hypotheses-testing as well as the comparative/empirical analysis.

3.5.3 HYPOTHESIS-TESTING PROCEDURE

In statistics, various test procedures have been developed to facilitate analytical comparisons and to examine differences between two or more groups based on independent samples containing numerical data. These statistical test procedures include, *inter alia*, the Wilcoxon rank sum test for differences in two medians, the Kruskal-Wallis rank test for differences in c medians, the pooled-variance *t* test for differences in two means and the one-way ANOVA *F* test for differences in c means. Choosing the suitable test procedure is the art of good data analysis.

Amongst the above mentioned hypotheses-testing procedures which have been evaluated to establish whether they can satisfy this study requirements, THE POOLED-VARIANCE *t* TEST design has been found to be the most appropriate one, as it has been noticed that its underlying assumptions fall in line with the research strategies.

In this regard, Berenson and Levine (1998:413) state : “A pooled-variance t test can be used to determine whether there is a significant difference between the means of the two populations if the assumptions made are that the two samples are randomly and independently drawn from normally distributed populations and, further, that the population variances are equal.”

Furthermore, the pooled-variance t test procedure meets the other selection criteria mentioned in section 3.1 which include the simplicity of the procedure, the ability to generalise the conclusions to be drawn up, the accessibility of tables reflecting the critical values for the test statistic and the statistical power of the procedure itself. The design is found to be able to ensure the validity of the conclusions to be generated.

As mentioned in chapter 1, section 1.5, the basic hypothesis of this study is that there is a significant difference between the financial performance of owner-controlled and management-controlled companies in South Africa, as measured in terms of profitability, asset management, liquidity, leverage and dividend payment, using the relevant financial ratios.

In order to confirm or reject this basic hypothesis, the null hypothesis which has to be statistically tested is that there is no difference in financial performance between owner-controlled and management-controlled companies in South Africa, as measured in terms of profitability, asset management, liquidity, leverage and dividend payment, using the relevant financial ratios.

The alternative hypothesis which must be confirmed should the null hypothesis be rejected is that there is a difference between the financial performance of owner-controlled and management-controlled companies in South Africa, as measured in terms of profitability, asset management, liquidity, leverage and dividend payment, using the relevant financial ratios.

Due to the fact that the selected financial ratios are surrogates for the financial performance of owner-controlled and management-controlled companies in South Africa, the statistical testing has to be performed on each one of them.

Formally stated, the null hypothesis is : $H_0 : \mu_1 = \mu_2$

and the alternative hypothesis is : $H_1 : \mu_1 \neq \mu_2$

where

μ_1 = a vector of criterion-variables of owner-controlled companies; and
 μ_2 = a vector of criterion-variables of management-controlled companies.

The vector for owner-controlled and management-controlled companies consist of criterion-variables μ_{ijk} , where

i represents the i^{th} sample;
j represents the j^{th} financial aspect; and
k represents the k^{th} variable.

Selected financial ratios and their statistical representations are reflected in Table 3.4 below.

FINANCIAL ASPECT	FINANCIAL RATIOS	PARAMETER
1.PROFITABILITY	PROFIT MARGIN ON SALES	μ_{i11}
	RETURN ON TOTAL ASSETS	μ_{i12}
	RETURN ON EQUITY	μ_{i13}
2.ASSET MANAGEMENT	FIXED ASSET TURNOVER	μ_{i21}
	TOTAL ASSET TURNOVER	μ_{i22}
3.LIQUIDITY	CURRENT RATIO	μ_{i31}
4.LEVERAGE	TOTAL DEBT TO EQUITY	μ_{i41}
	TOTAL DEBT TO TOTAL ASSETS	μ_{i42}
	LONG-TERM DEBT TO TOTAL ASSETS	μ_{i43}
5.DIVIDEND PAYMENT	DIVIDEND PAY-OUT RATIO	μ_{i51}

Table 3.4 : Financial ratios and their statistical representations.

Using the parameters related to the selected financial ratios as specified in Table 3.4, the null hypothesis ($H_0 : \mu_1 = \mu_2$) can be represented as follows :

- $H_0 :$
- (1) $\mu_{111} = \mu_{211}$ (Profit margin on sales)
 - (2) $\mu_{112} = \mu_{212}$ (Return on total assets)
 - (3) $\mu_{113} = \mu_{213}$ (Return on equity)
 - (4) $\mu_{121} = \mu_{221}$ (Fixed asset turnover)
 - (5) $\mu_{122} = \mu_{222}$ (Total asset turnover)
 - (6) $\mu_{131} = \mu_{231}$ (Current ratio)
 - (7) $\mu_{141} = \mu_{241}$ (Total debt to equity)
 - (8) $\mu_{142} = \mu_{242}$ (Total debt to total assets)
 - (9) $\mu_{143} = \mu_{243}$ (Long-term debt to total assets)
 - (10) $\mu_{151} = \mu_{251}$ (Dividend pay-out ratio)

Should the testing confirm all the above statistical equalities, then it can be concluded that there is no difference between the financial performance of owner-controlled and management-controlled companies in South Africa, which confirms the stated null hypothesis ($H_0 : \mu_1 = \mu_2$).

Contrary to this situation, if during the testing process one of the statistical equalities is not confirmed, the null hypothesis ($H_0 : \mu_1 = \mu_2$) will be rejected and the alternative hypothesis ($H_1 : \mu_1 \neq \mu_2$) accepted. In this situation, the financial aspect(s) and ratio(s) for which the equality is rejected will be identified as the ones being different between the two sets of data.

The significance of the difference in financial performance between owner-controlled and management-controlled companies in South Africa will depend on the number of rejections encountered during the application of the pooled-variance t test procedure, with the extreme situation being when none of the statistical equalities is accepted. In other words, should the majority of the above statistical equalities be rejected (at least six out of ten), it can be concluded that the difference is significant.

Formally stated, the alternative hypothesis ($H_1 : \mu_1 \neq \mu_2$) in its extreme situation can be represented as follows :

- $H_1 :$
- (1) $\mu_{111} \neq \mu_{211}$ (Profit margin on sales)
 - (2) $\mu_{112} \neq \mu_{212}$ (Return on total assets)
 - (3) $\mu_{113} \neq \mu_{213}$ (Return on equity)
 - (4) $\mu_{121} \neq \mu_{221}$ (Fixed asset turnover)
 - (5) $\mu_{122} \neq \mu_{222}$ (Total asset turnover)
 - (6) $\mu_{131} \neq \mu_{231}$ (Current ratio)
 - (7) $\mu_{141} \neq \mu_{241}$ (Total debt to equity)
 - (8) $\mu_{142} \neq \mu_{242}$ (Total debt to total assets)
 - (9) $\mu_{143} \neq \mu_{243}$ (Long-term debt to total assets)
 - (10) $\mu_{151} \neq \mu_{251}$ (Dividend pay-out ratio)

In order to accept or reject the research null hypothesis ($H_0: \mu_1 = \mu_2$), the pooled-variance t test procedure will be performed on all the research variables (financial ratios).

Should the null hypothesis be rejected during any testing, then the alternative hypothesis ($H_1 : \mu_1 \neq \mu_2$) will be confirmed, with the significance of the difference depending on the number of rejections, as mentioned above.

The pooled-variance t test statistic used in this study can be computed using the following equation :

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

Where

$$S_p^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{(n_1 - 1) + (n_2 - 1)}$$

and

S_p^2 = pooled variance

\bar{x}_1 = mean of the sample taken from owner-controlled companies

μ_1 = mean of the population constituted by owner-controlled companies

S_1^2 = variance of the sample taken from owner-controlled companies

n_1 = size of the sample taken from owner-controlled companies

\bar{x}_2 = mean of the sample taken from management-controlled companies

μ_2 = mean of the population constituted by management-controlled companies

S_2^2 = variance of the sample taken from management-controlled companies

n_2 = size of the sample taken from management-controlled companies

$(\bar{x}_1 - \bar{x}_2)$ = test statistic (i.e., the difference between two sample means)

$(\mu_1 - \mu_2)$ = difference between two population means = 0 under H_0

$\sqrt{S_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}$ = estimated standard error of the test statistic

The summarised format of the testing equation as mentioned above is stated below :

Sample Statistic - Hypothesised Population Parameter

Standard Error of the Statistic

Considering the primary objective of the study, the pooled-variance t test procedure, following a t distribution with $n_1 + n_2 - 2$ degree of freedom, will be conducted in its two-tailed format at the $\alpha = .05$ level of significance.

With this procedure, the null hypothesis related to each research variable is rejected and the alternative confirmed if the computed t -test statistic exceeds the upper-tailed critical value $t_{n_1+n_2-2}$ from the t distribution or if the computed test statistic is below the lower-tailed critical value $-t_{n_1+n_2-2}$ from the t distribution. This being the case, the decision rule can be formulated as follows :

Reject the null hypothesis H_0 if $t > t_{n_1+n_2-2}$

or if $t < -t_{n_1+n_2-2}$;

otherwise do not reject H_0 .

The decision rule and regions of rejection are displayed in Figure 3.2.

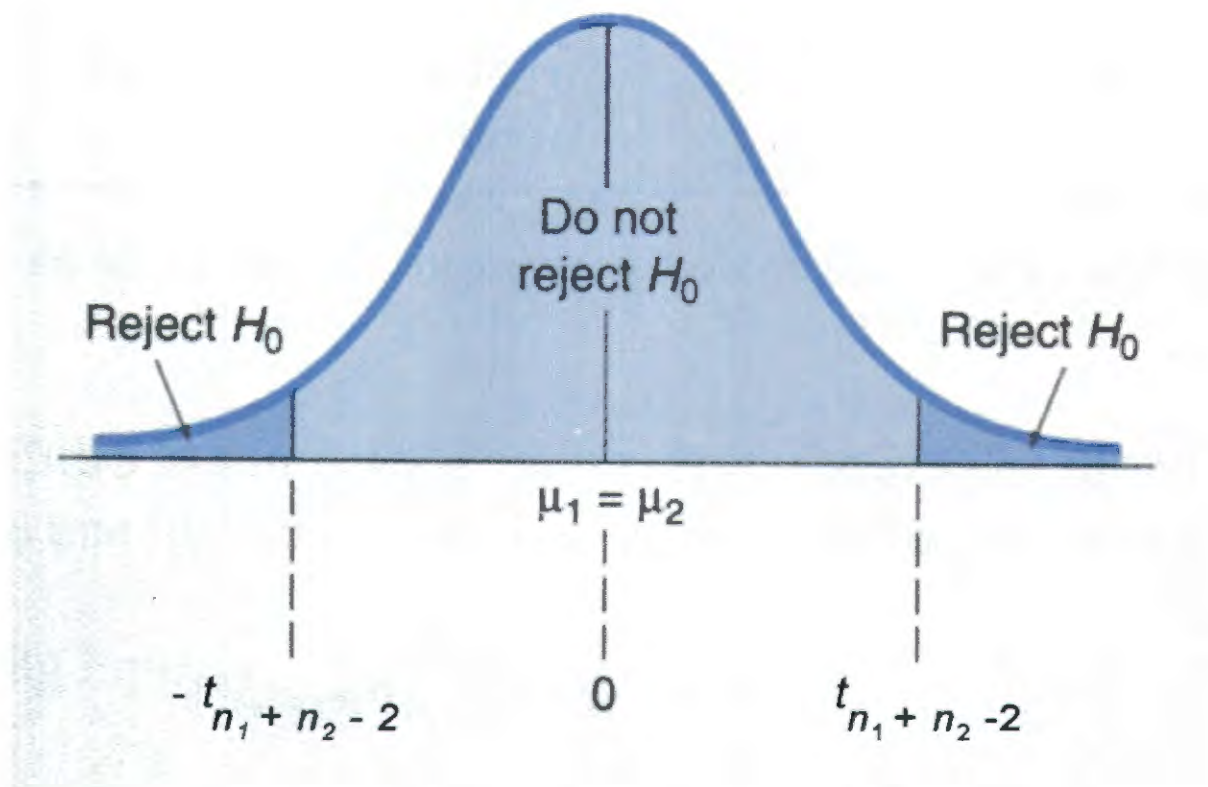


Figure 3.2 : Decision rule and rejection regions for the two-tailed t test.

3.6 CONCLUSION

It is expected that the application of this research methodology including the selected hypotheses testing procedure will not only lead to establishing whether there is a significant difference in financial performance of owner-controlled and management-controlled companies in South Africa but also facilitate the analysis of the main aspects of the difference, should it exist.

Appropriate mathematical and statistical techniques have been used to ensure the accuracy, validity and completeness of data collection, processing and analysis.

The randomly selected samples representing the owner-controlled and management-controlled companies have been adequately matched, with the period covered by the study and the socioeconomic environment being kept exactly identical in order to avoid the risk of a distorted analysis.

CHAPTER 4

ANALYSIS OF DATA

4.1 INTRODUCTION

A primary examination of the research data has been conducted by applying a descriptive statistics treatment to individual financial ratios with a view to obtaining statistical parameters such as mean, median, standard error, standard deviation and variance per sample and per year throughout the research period.

Subsequently, the hypothesis-testing as well as the comparative analysis of the two sample representing owner-controlled companies (Group A) and management-controlled companies (Group B), have been performed using the mean values emanating from the initial treatment as mentioned above. Each financial ratio has been distinctively tested and analysed.

It should be remembered that the hypothesis-testing has been performed using the pooled-variance *t* test procedure as explained in the previous chapter. Graphical illustrations have also been utilised to facilitate a straightforward comparison.

4.2 HYPOTHESIS-TESTING AND COMPARATIVE ANALYSIS

4.2.1 PROFITABILITY

Profitability ratios are of a particular interest to management, investors and lenders, as the profit generated by a company is needed to provide a return to investors and to finance future growth. A sign of sound financial health and how effectively the company is managed lies in its ability to generate a satisfactory profit and return on investment.

Key ratios of operating performance analysed under this subsection are profit margin on sales, return on total assets and return on equity.

4.2.1.1 PROFIT MARGIN ON SALES

This ratio is an important parameter of operating activity, as it calculates profitability obtained from revenues, thereby providing an indication of the company's pricing, cost structure and control as well as production efficiency .

4.2.1.1.1 Presentation of data

Data related to the profit margin on sales (in %) are reflected in Table 4.1 below.

	1989	1990	1991	1992	1993	1994	1995
GROUP A	5.16	5.02	3.90	3.19	3.34	4.54	4.32
GROUP B	5.89	5.19	4.99	4.68	5.09	5.36	5.76

Table 4.1 : Profit margin on sales data.

4.2.1.1.2 Hypothesis-testing

The representation of the null hypothesis to be tested is as follows :

$$H_0 : \quad (1) \quad \mu_{111} = \mu_{211}$$

This means that there is no difference in “profit margin on sales” between owner-controlled and management-controlled companies in South Africa.

The alternative to be confirmed should the above be rejected is as follows :

$$H_1 : \quad (1) \quad \mu_{111} \neq \mu_{211}$$

This alternative means that there is a difference in “profit margin on sales” between owner-controlled and management-controlled companies in South Africa.

Applying the pooled-variance *t* test procedure to data in Table 4.1, at the $\alpha = .05$ level of significance, a set of statistical results are obtained and displayed in Table 4.2.

	<i>Variable 1 (Group A)</i>	<i>Variable 2 (Group B)</i>
Mean	4.2096	5.2794
Variance	0.5944	0.1818
Observations	7.0000	7.0000
Pooled Variance	0.3881	
Hypothesized Mean Difference	0.0000	
df	12.0000	
t	-3.2128	
P(T<=t) two-tail	0.0075	
t Critical two-tail	2.1788	

Table 4.2 : Statistical results on “profit margin on sales” testing.

From the results reflected in Table 4.2 above, the critical values for this two-tailed test are + 2.1788 and - 2.1788.

As $t = -3.2128 < -t_{12} = -2.1788$, the null hypothesis $H_0 : (1) \mu_{111} = \mu_{211}$ of no difference in “profit margin on sales” is rejected, with the alternative $H_1 : (1) \mu_{111} \neq \mu_{211}$, stating that there is a difference being confirmed.

4.2.1.1.3 Comparative analysis

Figure 4.1 below depicts a straightforward comparison between owner-controlled and management-controlled data contained in Table 4.1. This comparison reveals that the profit margin on sales of owner-controlled companies has been below that of management-controlled companies throughout the entire research period. It is therefore evident that for each rand of sales, management-controlled companies have realised a better profit than their owner-controlled counterparts, which could be ascribed to a more effective cost structure and/or production efficiency.

During the period under review, the highest level of profit margin on sales for both groups was achieved in 1989. In that year, the ratio reached 5.89 and 5.16 for management-controlled and owner-controlled companies respectively. At the other end, the lowest level for both groups was seen in 1992, when the ratio declined to 4.68 for the management-controlled companies and to 3.19 for the owner-controlled ones.

The upward trend which started after 1992 for both groups could not be effectively maintained by owner-controlled companies, as their profit margin on sales, after reaching 4.54 in 1994, dropped to 4.32 in 1995.

As mentioned above, a straightforward comparison is depicted in Figure 4.1 below.

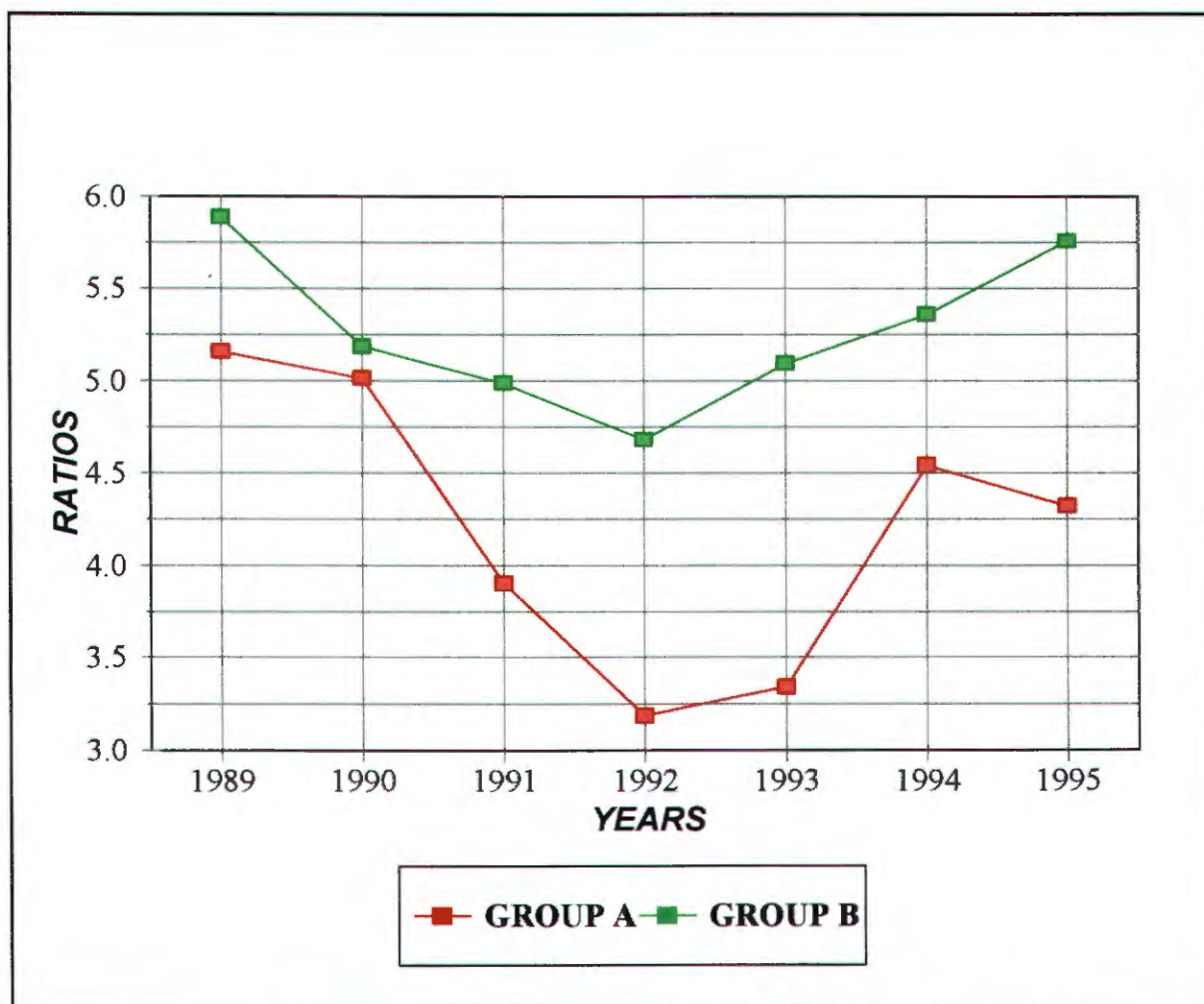


Figure 4.1 : Profit margin on sales.

4.2.1.2 RETURN ON TOTAL ASSETS

The effective use of assets can be measured by computing the return on total assets. This ratio measures management's ability and efficiency in using the company's assets to generate profits.

4.2.1.2.1 Presentation of data

Table 4.3 below reflects data pertaining to the return on total assets (in %).

	1989	1990	1991	1992	1993	1994	1995
GROUP A	8.98	7.86	6.19	4.93	5.61	7.76	7.86
GROUP B	10.51	9.11	8.72	7.81	8.25	8.69	9.51

Table 4.3 : Return on total assets data.

4.2.1.2.2 Hypothesis-testing

The representation of the null hypothesis to be tested is as follows :

$$H_0 : (2) \quad \mu_{112} = \mu_{212}$$

This means that there is no difference in "return on total assets" between owner-controlled and management-controlled companies in South Africa.

Should the above be rejected, the alternative to be confirmed is as follows :

$$H_1 : (2) \quad \mu_{112} \neq \mu_{212}$$

This alternative means that there is a difference in "return on total assets" between owner-controlled and management-controlled companies in South Africa.

The application of the pooled-variance t test on data in Table 4.3 , at the $\alpha = .05$ level of significance, generates a set of statistical results as displayed in Table 4.4.

	<i>Variable 1 (Group A)</i>	<i>Variable 2 (Group B)</i>
Mean	7.0281	8.9427
Variance	2.1410	0.7761
Observations	7.0000	7.0000
Pooled Variance	1.4586	
Hypothesized Mean Difference	0.0000	
df	12.0000	
t	-2.9658	
P(T<=t) two-tail	0.0118	
t Critical two-tail	2.1788	

Table 4.4 : Statistical results on “return on total assets” testing.

From the results reflected in Table 4.4 above, the critical values for this two-tailed test are + 2.1788 and - 2.1788.

As $t = -2.9658 < -t_{12} = -2.1788$, the null hypothesis $H_0 : (2) \mu_{112} = \mu_{212}$ of no difference in “return on total assets” is rejected, with the alternative $H_1 : (2) \mu_{112} \neq \mu_{212}$, stating that there is a difference accepted.

4.2.1.2.3 Comparative analysis

Similarly to the profit margin on sales, the return on total assets of owner-controlled companies has been lower than that of their management-controlled counterparts throughout the entire research period. This means that management-controlled companies have been more efficient than owner-controlled companies in the employment of resources to obtain the net income.

The highest return on total assets was achieved by both groups in 1989, with the ratio reaching 10.51 and 8.98 for management-controlled and owner-controlled companies respectively. As for the profit margin on sales, the lowest level for both groups was seen in 1992 when the owner-controlled companies realised 4.93 and the management-controlled companies 7.81.

After 1992, the upward trend started and was maintained by both owner-controlled and management-controlled companies until 1995.

A direct comparison is depicted in Figure 4.2 below.

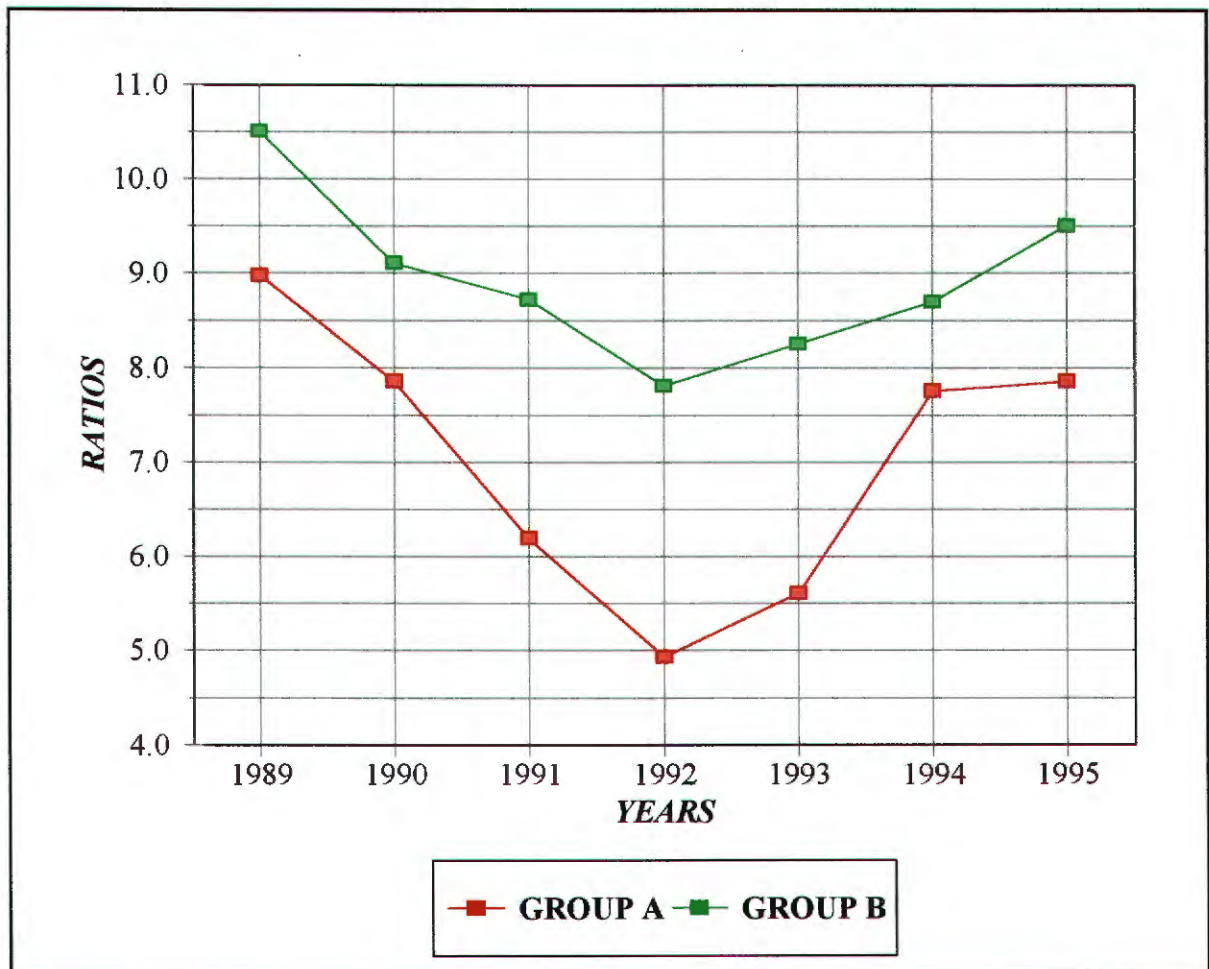


Figure 4.2 : Return on total assets.

4.2.1.3 RETURN ON EQUITY

The return on equity calculates the return the common shareholders are receiving on their original investment plus subsequent earnings retained in the company. This key financial ratio is the most effective measure of how management is performing for the owners.

4.2.1.3.1 Presentation of data

Table 4.5 below reflects data pertaining to the return on equity (in %).

	1989	1990	1991	1992	1993	1994	1995
GROUP A	18.72	16.65	13.88	10.39	11.90	16.48	17.80
GROUP B	23.42	20.69	19.55	17.44	17.64	18.81	19.70

Table 4.5 : Return on equity data.

4.2.1.3.2 Hypothesis-testing

The representation of the null hypothesis to be tested is as follows :

$$H_0 : (3) \quad \mu_{113} = \mu_{213}$$

This means that there is no difference in “return on equity” between owner-controlled and management-controlled companies in South Africa.

Should the above be rejected, the alternative to be confirmed is as follows :

$$H_1 : (3) \quad \mu_{113} \neq \mu_{213}$$

This alternative means that there is a difference in “return on equity” between owner-controlled and management-controlled companies in South Africa.

In applying the pooled-variance t test on data reflected in Table 4.5 , at the $\alpha = .05$ level of significance, a set of statistical results are obtained and displayed in Table 4.6.

	<i>Variable 1 (Group A)</i>	<i>Variable 2 (Group B)</i>
Mean	15.1163	19.6067
Variance	9.7532	4.1472
Observations	7.0000	7.0000
Pooled Variance	6.9502	
Hypothesized Mean Difference	0.0000	
df	12.0000	
t	-3.1866	
P(T<=t) two-tail	0.0078	
t Critical two-tail	2.1788	

Table 4.6 : Statistical results on “return on equity” testing.

From the results reflected in Table 4.6 above, the critical values for this two-tailed test are + 2.1788 and - 2.1788.

As $t = -3.1866 < -t_{12} = -2.1788$, the null hypothesis $H_0 : (3) \mu_{113} = \mu_{213}$ of no difference in “return on equity” is rejected, with the alternative $H_1 : (3) \mu_{113} \neq \mu_{213}$, stating that there is a difference being accepted.

4.2.1.3.3 Comparative analysis

The situation in respect of the return on equity is not different from the one regarding the return on total assets. Scrutiny of related data reveals that the return on equity of owner-controlled companies has been lower than that of their management-controlled counterparts during the seven years under review.

In terms of the above, it is deemed important to stress that shareholders of management-controlled companies have been realising a higher return on their investment than those of owner-controlled companies during the entire period covered by the study.

It should also be noted that for both groups, the highest return on equity was achieved in 1989, when the ratio reached 23.42 for management-controlled companies and 18.72 for the owner-controlled ones.

Similarly to the other two profitability ratios analysed above (the profit margin on sales and the return on total assets), the return on equity dropped to its lowest level in 1992. In that year the owner-controlled companies achieved 10.39 and the management-controlled companies 17.44.

After 1992, the upward trend started for both groups and was maintained until 1995.

Figure 4.3 simplifies a comparison between the groups.

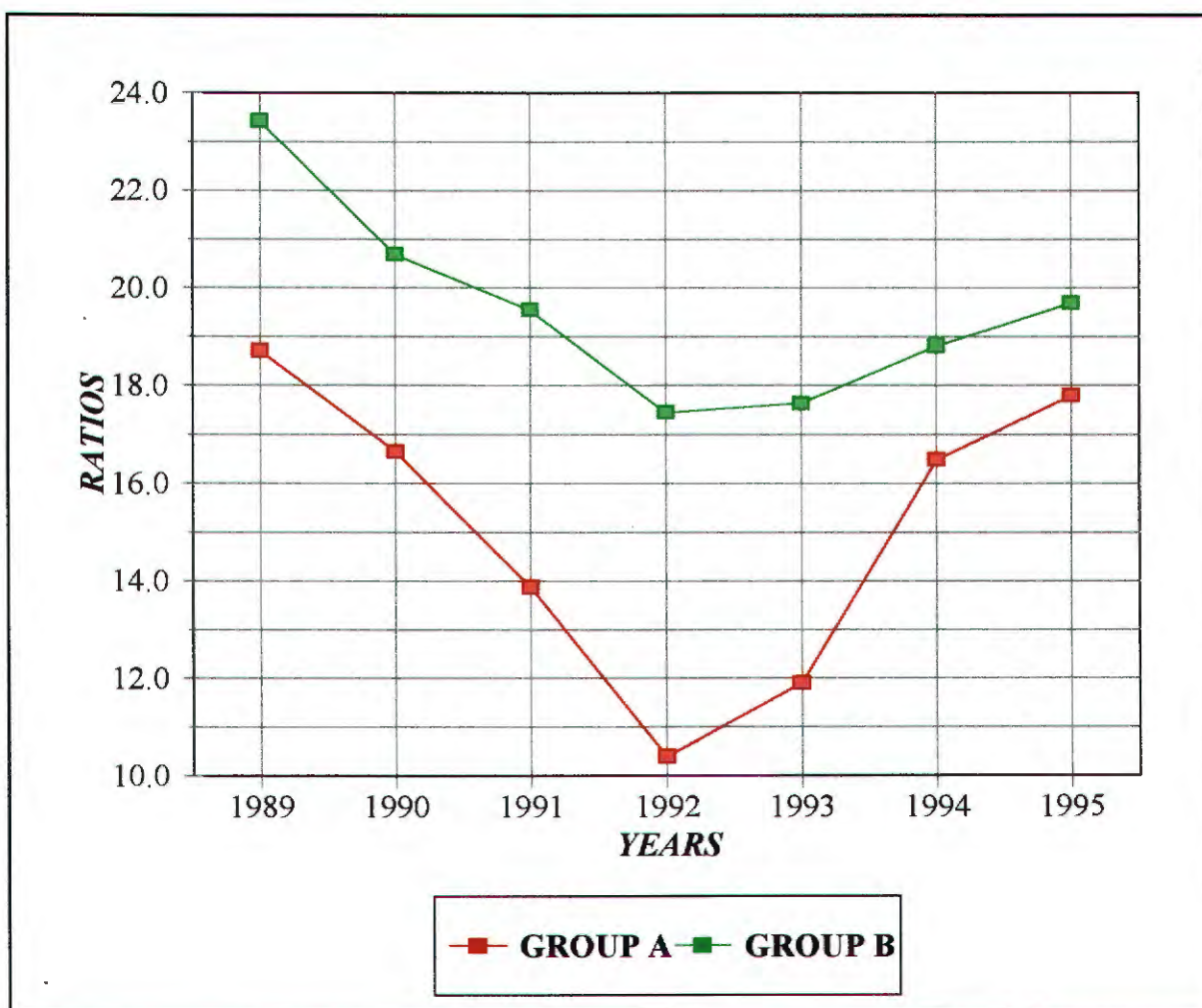


Figure 4.3 : Return on equity.

4.2.2 ASSET MANAGEMENT

The asset management ratios evaluate how efficiently a company's assets are utilised to generate sales. The two ratios analysed under this financial aspect are fixed asset turnover and total asset turnover.

4.2.2.1 FIXED ASSET TURNOVER

The fixed asset turnover ratio measures the efficiency with which a company fixed assets are used to generate sales. A low fixed asset turnover ratio, when compared to other companies in the industry, may indicate that a company possesses too much investment in fixed assets relative to sales. It should, however, be noted that the fixed asset turnover ratio can be positively affected in instances where a company leases more fixed assets than it buys or keeps old and/or fully depreciated fixed assets.

4.2.2.1.1 Presentation of data

Table 4.7 below reflects data related to the fixed asset turnover ratio.

	1989	1990	1991	1992	1993	1994	1995
GROUP A	21.64	10.87	10.05	11.34	13.04	13.84	17.05
GROUP B	7.28	6.27	6.17	5.98	5.87	5.86	6.32

Table 4.7 : Fixed asset turnover data.

4.2.2.1.2 Hypothesis-testing

The representation of the null hypothesis to be tested is as follows :

$$H_0 : \quad (4) \quad \mu_{121} = \mu_{221}$$

This means that there is no difference in "fixed asset turnover" between owner-controlled and management-controlled companies in South Africa.

Should the above be rejected, the alternative to be confirmed is as follows :

$$H_1 : \quad (4) \quad \mu_{121} \neq \mu_{221}$$

This alternative means that there is a difference in “fixed asset turnover” between owner-controlled and management-controlled companies in South Africa.

Applying the pooled-variance t test on data contained in Table 4.7 , at the $\alpha = .05$ level of significance, a set of statistical results are obtained and reflected in Table 4.8.

	<i>Variable 1 (Group A)</i>	<i>Variable 2 (Group B)</i>
Mean	13.9773	6.2509
Variance	16.8501	0.2400
Observations	7.0000	7.0000
Pooled Variance	8.5450	
Hypothesized Mean Difference	0.0000	
df	12.0000	
t	4.9449	
P(T<=t) two-tail	0.0003	
t Critical two-tail	2.1788	

Table 4.8 : Statistical results on “fixed asset turnover” testing.

From the results reflected in Table 4.8 above, the critical values for this two-tailed test are + 2.1788 and - 2.1788.

As $t = 4.9449 > t_{12} = 2.1788$, the null hypothesis $H_0 : (4) \mu_{121} = \mu_{221}$ of no difference in “fixed asset turnover” is rejected, with the alternative $H_1 : (4) \mu_{121} \neq \mu_{221}$, stating that there is a difference being accepted.

4.2.2.1.3 Comparative analysis

The fixed asset turnover of owner-controlled companies has stayed above the one of management-controlled companies throughout the entire research period. This could mean that, relative to the level of fixed assets used, owner-controlled companies have generated more sales than their management-controlled counterparts. However, as mentioned above, this ratio can be positively affected in instances where a company leases more fixed assets than it buys or keeps old and/or fully depreciated fixed assets, with high rental and/or maintenance costs being incurred.

For both groups, the highest fixed asset turnover was achieved in 1989, when the ratio was at 21.64 for the owner-controlled companies and 7.28 for the management-controlled ones.

A decline which started after 1989 for the two groups was reversed for owner-controlled companies in 1991 when the ratio, after reaching a low of 10.05 commenced its upward trend until 1995. Regarding management-controlled companies, the decline in their fixed asset turnover persisted until 1994. In that year, the ratio attained a low of 5.86 prior to bouncing to 6.32 in 1995. A graphical illustration in Figure 4.4 facilitates a direct comparison between the two groups.

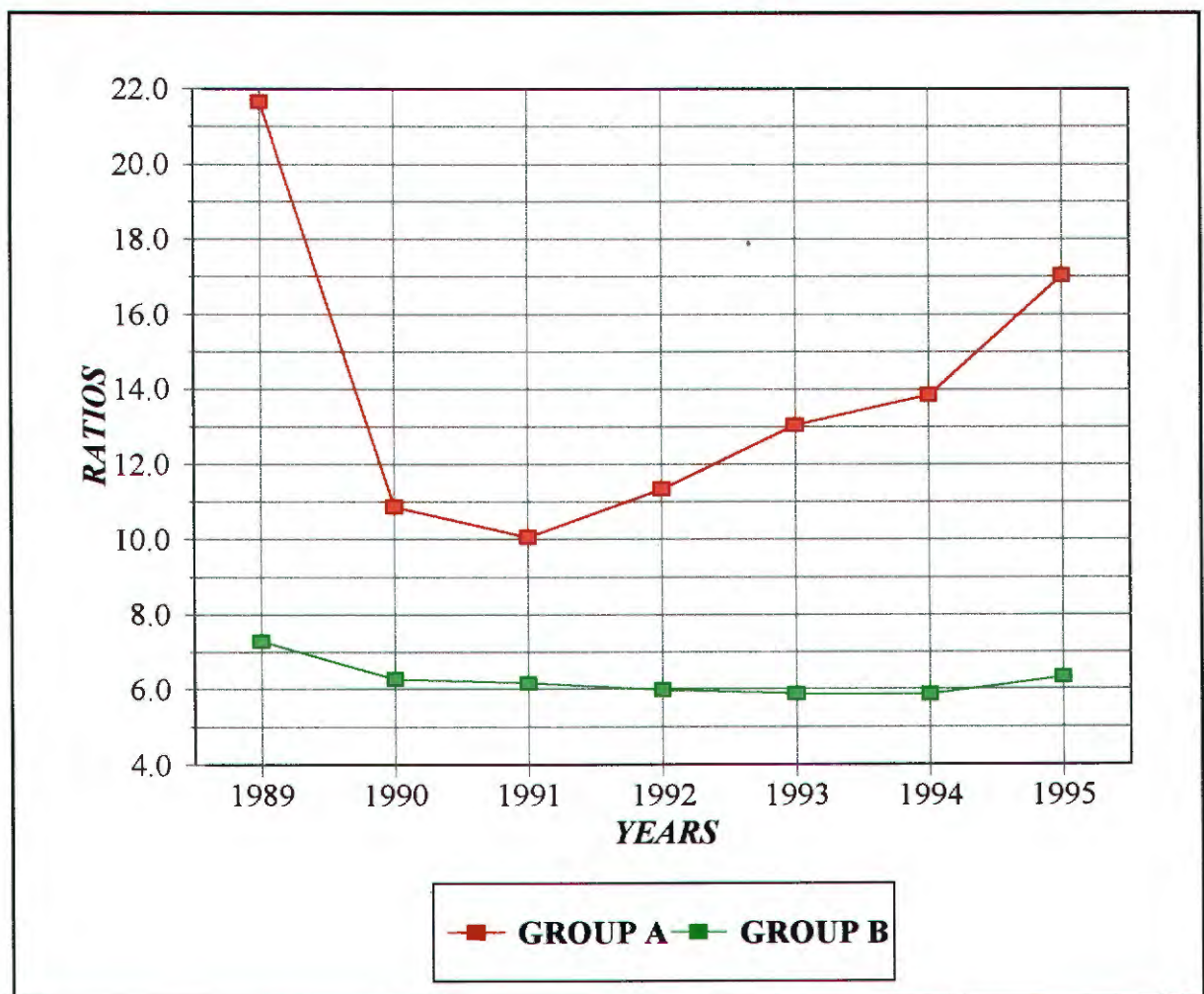


Figure 4.4 : Fixed asset turnover.

4.2.2.2 TOTAL ASSET TURNOVER

The total asset turnover ratio is useful in appraising the company's ability to utilise its asset base efficiently to generate sales.

A low total asset turnover ratio, when compared to other companies in the industry, may indicate that a company has too much investment in current and/or fixed assets relative to sales. However, it should also be noted that this ratio could be positively affected in instances where a company leases more fixed assets than it buys or keeps old and/or fully depreciated fixed assets.

4.2.2.2.1 Presentation of data

Data related to the total asset turnover ratio are reflected in Table 4.9 below.

	1989	1990	1991	1992	1993	1994	1995
GROUP A	2.80	2.33	2.29	2.27	2.47	2.45	2.46
GROUP B	1.97	1.95	1.89	1.78	1.77	1.77	1.80

Table 4.9 : Total asset turnover data.

4.2.2.2.2 Hypothesis-testing

The representation of the null hypothesis to be tested is as follows :

$$H_0 : (5) \quad \mu_{122} = \mu_{222}$$

This means that there is no difference in "total asset turnover" between owner-controlled and management-controlled companies in South Africa.

Should the above be rejected, the alternative to be confirmed is as follows :

$$H_1 : (5) \quad \mu_{122} \neq \mu_{222}$$

This alternative means that there is a difference in "total asset turnover" between owner-controlled and management-controlled companies in South Africa.

Applying the pooled-variance t test on data contained in Table 4.9 , at the $\alpha = .05$ level of significance, a set of statistical results are obtained and reflected in Table 4.10.

	<i>Variable 1 (Group A)</i>	<i>Variable 2 (Group B)</i>
Mean	2.4389	1.8466
Variance	0.0329	0.0077
Observations	7.0000	7.0000
Pooled Variance	0.0203	
Hypothesized Mean Difference	0.0000	
df	12.0000	
t	7.7805	
P(T<=t) two-tail	0.0000	
t Critical two-tail	2.1788	

Table 4.10 : Statistical results on “total asset turnover” testing.

From the results reflected in Table 4.10 above, the critical values for this two-tailed test are + 2.1788 and - 2.1788.

As $t = 7.7805 > t_{12} = 2.1788$, the null hypothesis $H_0 : (5) \mu_{122} = \mu_{222}$ of no difference in “total asset turnover” is rejected, with the alternative $H_1 : (5) \mu_{122} \neq \mu_{222}$, stating that there is a difference being accepted.

4.2.2.2.3 Comparative analysis

The total asset turnover ratio of owner-controlled companies has been above the one of management-controlled companies throughout the entire research period. This could mean that, relative to the level of total assets used, owner-controlled companies have generated more sales than their management-controlled counterparts. However, as mentioned above, this ratio could be positively affected in instances where a company leases more fixed assets than it buys or keeps old and/or fully depreciated fixed assets, with high rental and/or maintenance costs being incurred.

For both groups, the highest fixed asset turnover was achieved in 1989, when the ratio was at 2.80 for owner-controlled companies and 1.97 for management-controlled companies.

During the entire research period, the total asset turnover ratio of management-controlled companies has stayed below 2, with its lowest level being seen in 1993 and 1994 at 1.77. With regard to owner-controlled companies, the total asset turnover ratio has stayed above 2.25 and its lowest level occurred in 1992 at 2.27.

A straightforward comparison between the two groups is depicted in Figure 4.5.

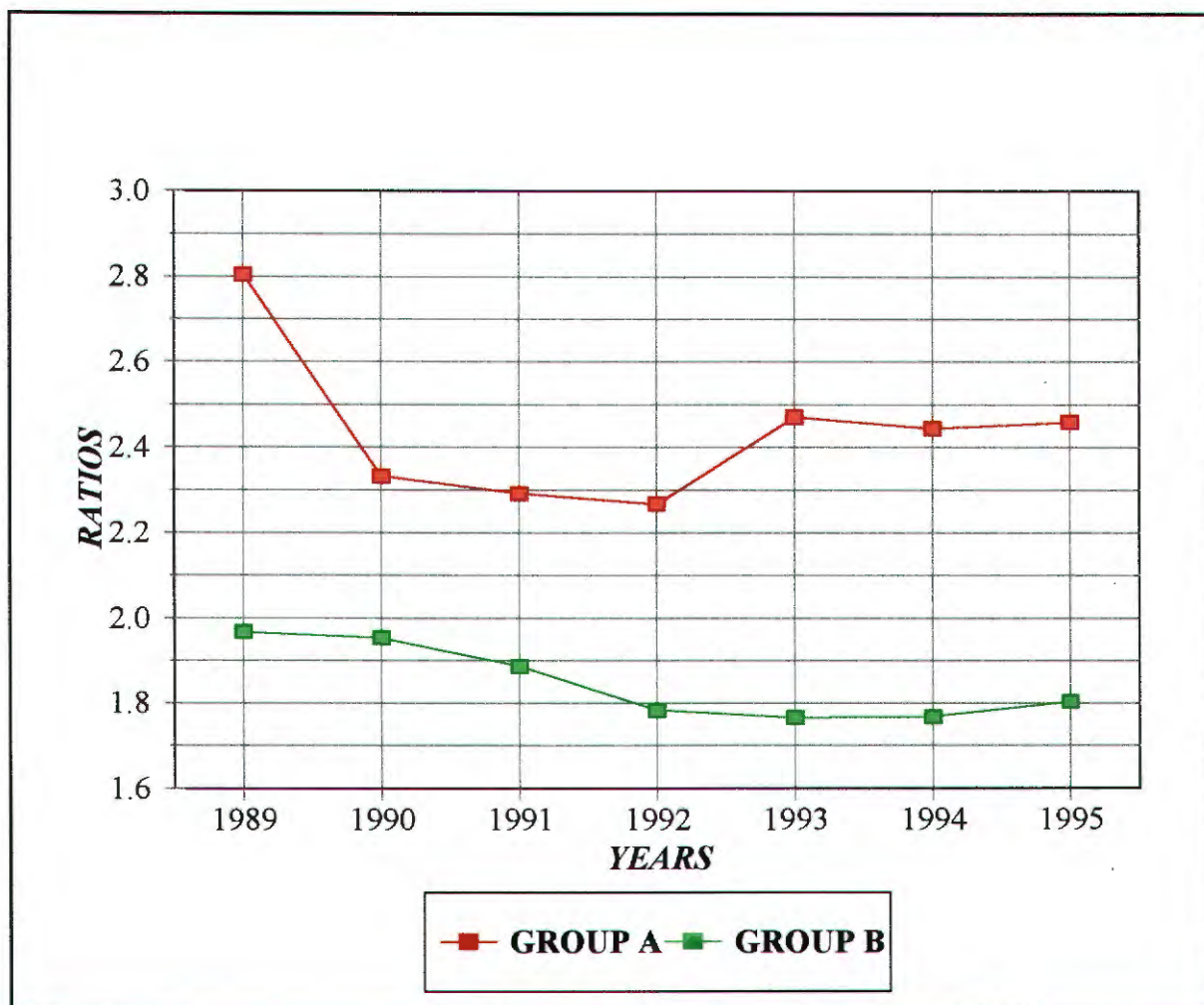


Figure 4.5 : Total asset turnover.

4.2.3 LIQUIDITY

Liquidity ratios are computed in order to provide an indication of how quickly a company's current assets can be converted to cash in order to pay current liabilities. For a company to survive, it must maintain enough liquidity to meet current obligations when they fall due.

It should be noted that short-term lenders carefully monitor liquidity ratios as they advance short-term credit to finance current assets. The key liquidity ratio analysed under this subsection is the current ratio.

4.2.3.1 CURRENT RATIO

The current ratio is related to net working capital, as it calculates the ratio between the current assets and current liabilities. It is used to appraise the ability of a company to satisfy its current debt out of current assets.

If the current ratio is too low, creditors may become reluctant to grant further credit to the company as they will be concerned about the company's ability to meet its current obligations. If it is too high, it may indicate that cash, inventories and/or accounts receivable are too high.

While high accounts receivable may be seen as a result of poor collection policies and/or a too lenient credit policy, a level of inventories which is too high may indicate the existence of old or slow moving stock.

4.2.3.1.1 Presentation of data

Current ratio data are reflected in Table 4.11 below.

	1989	1990	1991	1992	1993	1994	1995
GROUP A	1.66	1.62	1.58	1.58	1.72	1.61	1.73
GROUP B	1.49	1.54	1.61	1.58	1.58	1.62	1.61

Table 4.11 : Current ratio data.

4.2.3.1.2 Hypothesis-testing

The representation of the null hypothesis to be tested is as follows :

$$H_0 : \quad (6) \quad \mu_{131} = \mu_{231}$$

This means that there is no difference in “current ratio” between owner-controlled and management-controlled companies in South Africa.

Should the above be rejected, the alternative to be confirmed is as follows :

$$H_1 : \quad (6) \quad \mu_{131} \neq \mu_{231}$$

This alternative means that there is a difference in “current ratio” between owner-controlled and management-controlled companies in South Africa.

Statistical results obtained from the application of the pooled-variance *t* test procedure to data in Table 4.11, at the $\alpha = .05$ level of significance, are reflected in Table 4.12 below.

	<i>Variable 1 (Group A)</i>	<i>Variable 2 (Group B)</i>
Mean	1.6424	1.5753
Variance	0.0039	0.0021
Observations	7.0000	7.0000
Pooled Variance	0.0030	
Hypothesized Mean Difference	0.0000	
df	12.0000	
t	2.2917	
P(T<=t) two-tail	0.0408	
t Critical two-tail	2.1788	

Table 4.12 : Statistical results on “current ratio” testing.

From the results reflected in Table 4.12 above, the critical values for this two-tailed test are + 2.1788 and - 2.1788.

As $t = 2.2917 > t_{12} = 2.1788$, the null hypothesis $H_0 : (6) \mu_{131} = \mu_{231}$ of no difference in “current ratio” is rejected, with the alternative $H_1 : (6) \mu_{131} \neq \mu_{231}$, stating that there is a difference being accepted.

4.2.3.1.3 Comparative analysis

Figure 4.6 hereafter depicts a straightforward comparison between owner-controlled and management-controlled companies data as reflected in Table 4.11.

Although the current ratio of owner-controlled companies has been in general above the one of their management-controlled counterparts, it is deemed important to mention that the ratio has been above 1.45 for both groups.

In 1993 and 1995, the owner-controlled companies reached the summits of 1.72 and 1.73 respectively. The lowest levels for this group of companies were seen in 1991 and 1992 when the ratio stayed around 1.58. Regarding management controlled companies, the highest current ratio was achieved in 1994 at 1.62, with the bottom being realised in 1989 at 1.49.

The current ratio of management-controlled companies was higher than that of owner-controlled companies only twice during the entire research period : in 1991, 1.61 against 1.58 and in 1994, 1.62 against 1.61.

From a direct comparison, one can be concluded that owner-controlled companies have been more liquid than management-controlled companies. Seen in perspective together with other ratios, such as profitability and asset management ratios, it appears that owner-controlled companies have been more focussed in their operations on current assets/liabilities than on long-term investments.

The current assets as percentage of total assets have been around 65% and 60% for owner-controlled and management-controlled companies respectively.

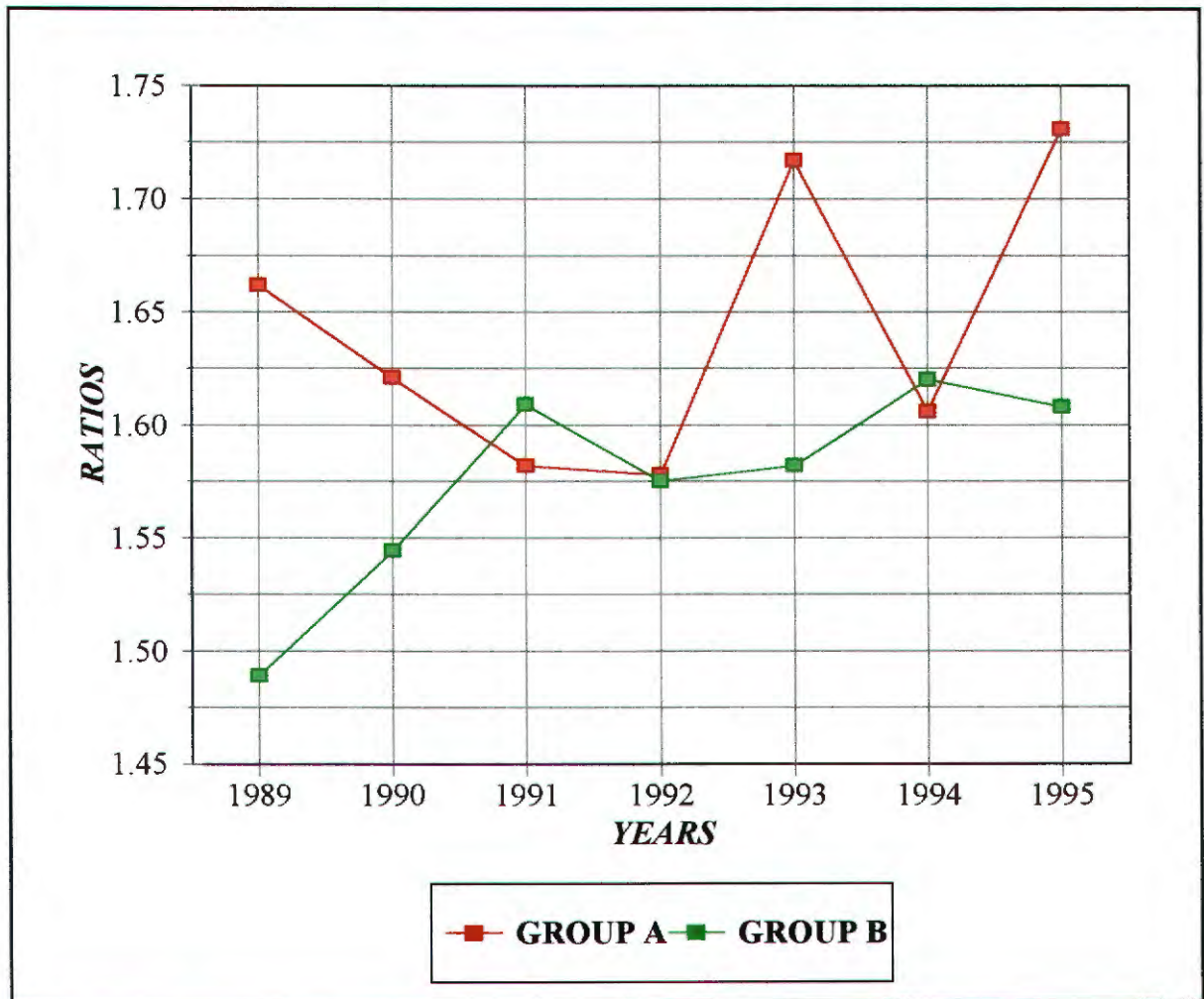


Figure 4.6 : Current ratio.

4.2.4 LEVERAGE

Leverage refers to the use of debt to enhance the rate of return on equity. It is generally true to state that the financial stability of a company depends on the equity provided by its shareholders, including retained earnings. The more equity that a company has, the more financially stable it will be. Leverage occurs when a company borrows funds at a cost that is less than it earns on investments.

Three ratios examined under this subsection are total debt to total equity, total debt to total assets and long-term debt to total assets. Data related to these ratios are expressed in percentage.

4.2.4.1 TOTAL DEBT TO EQUITY

The total debt to equity ratio tests the financial stability of a company by measuring the total investment by creditors against the total investment of its shareholders/owners.

Due to the fact that a high degree of debt in the capital structure may make it difficult for a company to satisfy interest charges and principal payments at maturity, this ratio is found to be a major solvency measure.

A high total debt to equity ratio usually indicates a risky investment for lenders as the coverage of asset values over amounts owing is very slim. In addition, excessive debt is often seen as a sign of less financial stability due to the fact that the company will have more difficulty to obtain funds during a tight money market.

Nevertheless, it should be noted that, if management can identify profitable investments, additional debt or leverage could sometimes make the company more profitable. The important trade-off in choosing the most efficient way to obtain funds (through debt or equity) is risk versus profits.

4.2.4.1.1 Presentation of data

Data related to the total debt to equity ratio are reflected in Table 4.13 below (in %).

	1989	1990	1991	1992	1993	1994	1995
GROUP A	146.53	147.88	141.26	138.89	134.24	130.51	144.30
GROUP B	138.17	137.38	129.29	125.41	119.35	122.78	118.70

Table 4.13 : Total debt to equity data.

4.2.4.1.2 Hypothesis-testing

The representation of the null hypothesis to be tested is as follows :

$$H_0 : \quad (7) \quad \mu_{141} = \mu_{241}$$

This means that there is no difference in “total debt to equity” between owner-controlled and management-controlled companies in South Africa.

Should the above be rejected, the alternative to be confirmed is as follows :

$$H_1 : \quad (7) \quad \mu_{141} \neq \mu_{241}$$

This alternative means that there is a difference in “total debt to equity” between owner-controlled and management-controlled companies in South Africa.

Statistical results obtained from the application of the pooled-variance *t* test on data contained in Table 4.13 , at the $\alpha = .05$ level of significance, are reflected in Table 4.14 below.

	<i>Variable 1 (Group A)</i>	<i>Variable 2 (Group B)</i>
Mean	140.5146	127.2986
Variance	41.2324	64.1531
Observations	7.0000	7.0000
Pooled Variance	52.6928	
Hypothesized Mean Difference	0.0000	
df	12.0000	
t	3.4061	
P(T<=t) two-tail	0.0052	
t Critical two-tail	2.1788	

Table 4.14 : Statistical results on “total debt to equity” testing.

From the results reflected in Table 4.14 above, the critical values for this two-tailed test are + 2.1788 and - 2.1788.

As $t = 3.4061 > t_{12} = 2.1788$, the null hypothesis $H_0 : (7) \mu_{141} = \mu_{241}$ of no difference in “total debt to equity” is rejected, with the alternative $H_1 : (7) \mu_{141} \neq \mu_{241}$, stating that there is a difference being confirmed.

4.2.4.1.3 Comparative analysis

The total debt to equity ratio of owner-controlled companies has been higher than the one of management-controlled companies throughout the entire research period which could mean that management-controlled companies have been financially more stable than owner-controlled companies.

It should be noted that management-controlled companies have effectively maintained a declining trend during the research period except in 1994 when the ratio, after reaching 119.35 in 1993, jumped to 122.78 in 1994 prior to falling back to 118.70 in 1995. The highest total debt to equity ratio of management-controlled companies was attained in 1989 at 138.17 and the lowest in 1995 at 118.70.

With regard to owner-controlled companies, the summit was attained in 1990 at 147.88 after which the ratio started a declining trend. The lowest level was achieved in 1994 at 130.51, with the ratio climbing back to 144.30 in 1995.

In the light of this analysis, it is obvious to mention that for each 100 rand invested by shareholders owner-controlled companies have borrowed more funds than their management-controlled counterparts, which might result in high interest charges being incurred.

Figure 4.7 below depicts a straightforward comparison between the two groups of companies.

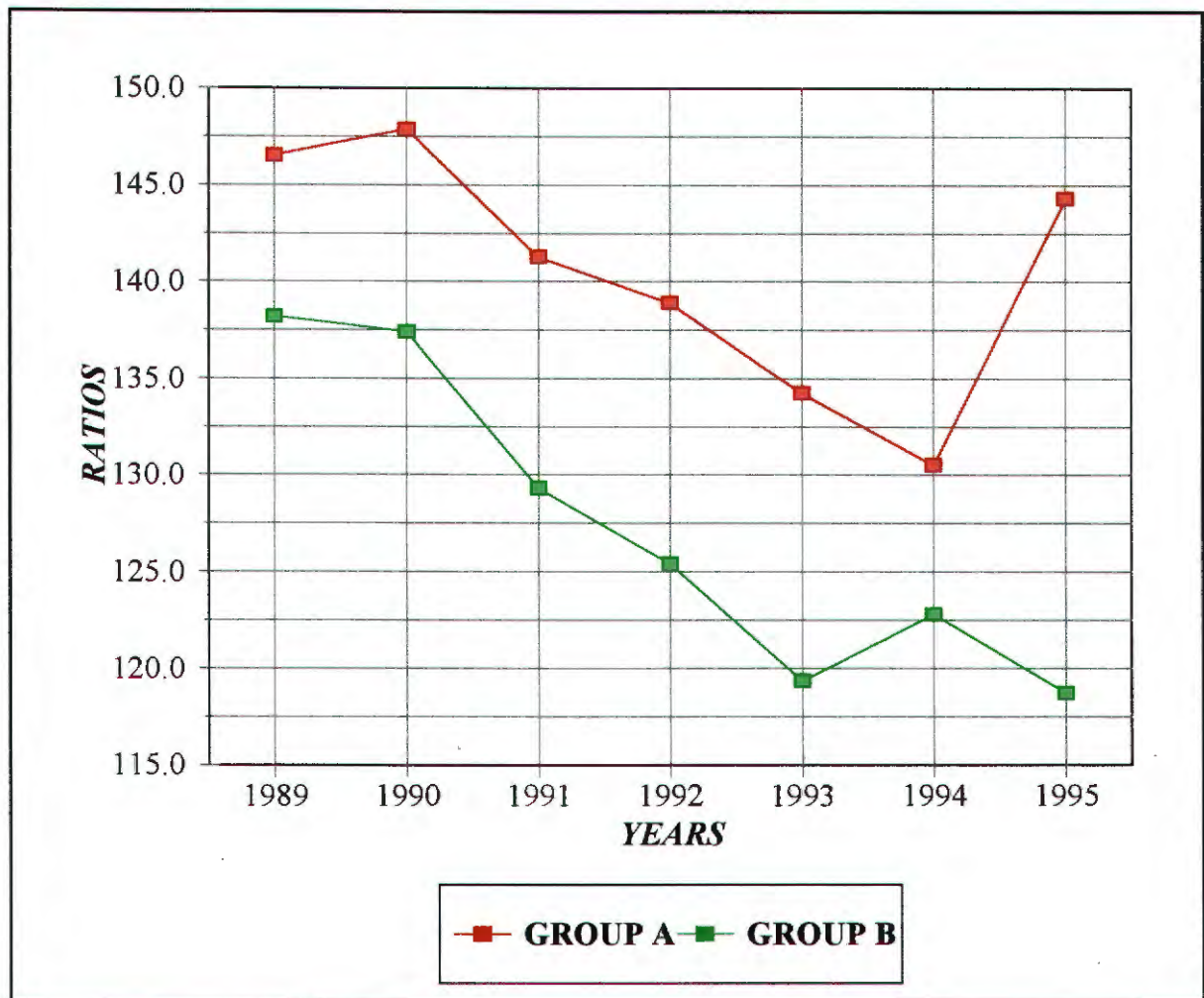


Figure 4.7 : Total debt to equity.

4.2.4.2 TOTAL DEBT TO TOTAL ASSETS

The total debt to total assets ratio is another test for financial stability as it measures the amount of financing provided by creditors against all the assets of the company. In other words, this ratio reveals the percentage of total funds obtained from creditors in comparison to all the company's assets.

Generally speaking, the company with a lower total debt to total assets ratio is considered more stable financially than the one for which the ratio is higher. Creditors would prefer to see a low total debt to total assets ratio since there is a better cushion for possible losses if the company goes bankrupt.

It should be noted that an optimum total debt to total assets ratio may exist and that at that level the weighted average cost of capital will be less than at any other total debt to total assets level.

4.2.4.2.1 Presentation of data

Table 4.15 contains data related to the total debt to total assets ratio (in %).

	1989	1990	1991	1992	1993	1994	1995
GROUP A	53.10	53.40	54.67	53.75	52.65	53.53	54.32
GROUP B	53.85	53.62	53.22	52.23	51.09	51.38	50.92

Table 4.15 : Total debt to total assets data.

4.2.4.2.2 Hypothesis-testing

The representation of the null hypothesis to be tested is as follows :

$$H_0 : \quad (8) \quad \mu_{142} = \mu_{242}$$

This means that there is no difference in "total debt to total assets" between owner-controlled and management-controlled companies in South Africa.

Should the above be rejected, the alternative to be confirmed is as follows :

$$H_1 : (8) \quad \mu_{142} \neq \mu_{242}$$

This alternative means that there is a difference in “total debt to total assets” between owner-controlled and management-controlled companies in South Africa.

Statistical results obtained from the application of the pooled-variance t test on data contained in Table 4.15 , at the $\alpha = .05$ level of significance, are reflected in Table 4.16 below.

	<i>Variable 1 (Group A)</i>	<i>Variable 2 (Group B)</i>
Mean	53.6319	52.3301
Variance	0.4790	1.5355
Observations	7.0000	7.0000
Pooled Variance	1.0073	
Hypothesized Mean Difference	0.0000	
df	12.0000	
t	2.4265	
P(T<=t) two-tail	0.0319	
t Critical two-tail	2.1788	

Table 4.16 : Statistical results on “total debt to total assets” testing.

From the results reflected in Table 4.16 above, the critical values for this two-tailed test are + 2.1788 and - 2.1788.

As $t = 2.4265 > t_{12} = 2.1788$, the null hypothesis $H_0 : (8) \mu_{142} = \mu_{242}$ of no difference in “total debt to total assets” is rejected, with the alternative $H_1 : (8) \mu_{142} \neq \mu_{242}$, stating that there is a difference being confirmed.

4.2.4.2.3 Comparative analysis

The total debt to total assets ratio of owner-controlled companies has been above the one of management-controlled companies throughout the entire research period except in 1989 and 1990. This can generally mean that management-controlled companies have been financially more stable than their owner-controlled counterparts (after 1990), since the proportion of their debt against their total assets has been lower than that of owner-controlled companies for the major part of the research period.

Similarly to the total debt to equity ratio discussed in the previous subsection, management-controlled companies effectively maintained a declining trend during the period under review except in 1994 when the ratio, after reaching 51.09 in 1993, jumped to 51.38 in 1994 prior to decreasing to 50.92 in 1995. The highest total debt to equity ratio of management-controlled companies was attained in 1989 at 53.85 and the lowest in 1995 at 50.92.

With regard to owner-controlled companies, the highest level was attained in 1991 at 54.67. After that year, the ratio started a declining trend which was quickly reversed two years later. The lowest level achieved by owner-controlled companies in terms of their total debt to total assets ratio was seen in 1993 at 52.65. This was followed by a jump to 53.53 in 1994 and 54.32 in 1995.

This analysis reveals that for each 100 rand of total assets owner-controlled companies have in general borrowed more funds than their management-controlled counterparts, which might result in high interest charges being incurred.

Figure 4.8 below depicts a straightforward comparison between owner-controlled and management-controlled companies.

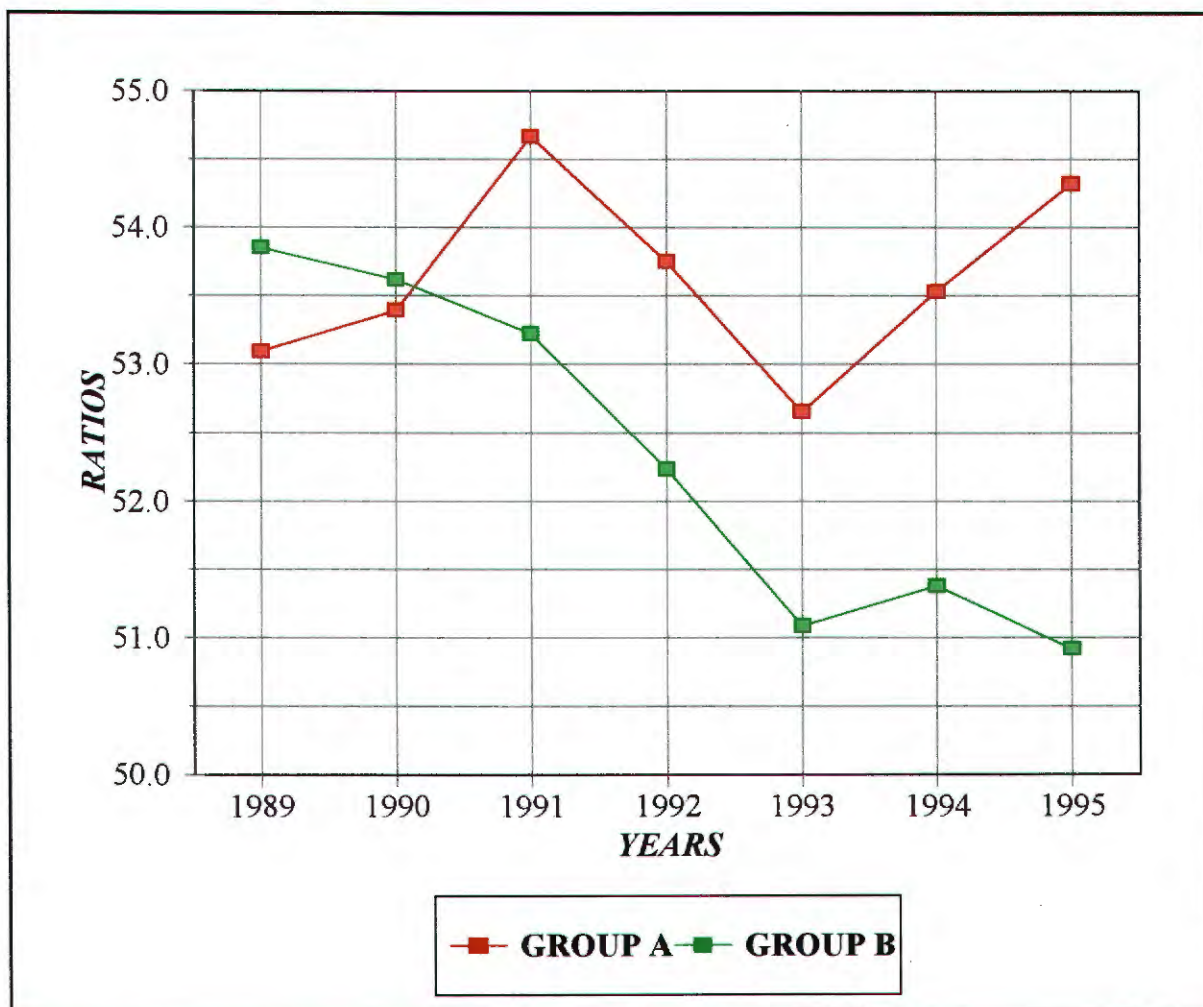


Figure 4.8 : Total debt to total assets.

4.2.4.3 LONG-TERM DEBT TO TOTAL ASSETS

The long-term debt to total assets ratio assesses the financial stability of a company by measuring the amount of financing provided by creditors in terms of long-term debt against all the assets held by that company.

In order to generate accurate conclusions in respect of financial stability, the long-term debt to total assets ratio should not be analysed in isolation but rather in conjunction with the two other leverage ratios, namely the total debt to equity and total debt to total assets since this ratio can easily be distorted by an excessive use of current liabilities.

4.2.4.3.1 Presentation of data

Data pertaining to the long-term debt to total assets ratio are reflected in Table 4.17 below (in %).

	1989	1990	1991	1992	1993	1994	1995
GROUP A	7.90	9.38	9.99	8.79	8.60	7.39	7.78
GROUP B	9.32	11.44	12.54	11.10	9.76	9.37	7.84

Table 4.17 : Long-term debt to total assets data.

4.2.4.3.2 Hypothesis-testing

The representation of the null hypothesis to be tested is as follows :

$$H_0 : \quad (9) \quad \mu_{143} = \mu_{243}$$

This means that there is no difference in “long-term debt to total assets” between owner-controlled and management-controlled companies in South Africa.

Should the above be rejected, the alternative to be confirmed is as follows :

$$H_1 : \quad (9) \quad \mu_{143} \neq \mu_{243}$$

This alternative means that there is a difference in “long-term debt to total assets” between owner-controlled and management-controlled companies in South Africa.

Applying the pooled-variance t test on data contained in Table 4.17, at the $\alpha = .05$ level of significance, a set of statistical results are obtained and reflected in Table 4.18.

	<i>Variable 1 (Group A)</i>	<i>Variable 2 (Group B)</i>
Mean	8.5474	10.1957
Variance	0.8662	2.5042
Observations	7.0000	7.0000
Pooled Variance	1.6852	
Hypothesized Mean Difference	0.0000	
df	12.0000	
t	-2.3754	
P(T<=t) two-tail	0.0351	
t Critical two-tail	2.1788	

Table 4.18 : Statistical results on “long-term debt to total assets” testing.

From the results reflected in Table 4.18 above, the critical values for this two-tailed test are + 2.1788 and - 2.1788.

As $t = -2.3754 < t_{12} = -2.1788$, the null hypothesis $H_0 : (9) \mu_{143} = \mu_{243}$ of no difference in “long-term debt to total assets” is rejected, with the alternative $H_1 : (9) \mu_{143} \neq \mu_{243}$, stating that there is a difference being accepted.

4.2.4.3.3 Comparative analysis

Contrary to the two leverage ratios analysed in the previous subsections, the long-term debt to total assets ratio of management-controlled companies has been higher than that of owner-controlled companies throughout the period covered by the study.

Seen in conjunction with the results obtained from the analysis of the total debt to equity and total debt to total assets ratios, it can be concluded that owner-controlled companies have used more current liabilities in their operations than long-term financing.

For both groups the ratio has followed a *quasi*-similar trend, increasing from 7.90 in 1989 to 9.99 in 1991 for owner-controlled companies and from 9.32 in 1989 to 12.54 in 1991 for management-controlled companies. The declining move which started after 1991 was effectively maintained by management-controlled companies achieving a low of 7.84 in 1995. Regarding owner-controlled companies, the lowest level was attained in 1994 at 7.39, with the ratio jumping to 7.78 in 1995.

A graphical illustration in Figure 4.9 facilitates a direct comparison between the two groups.

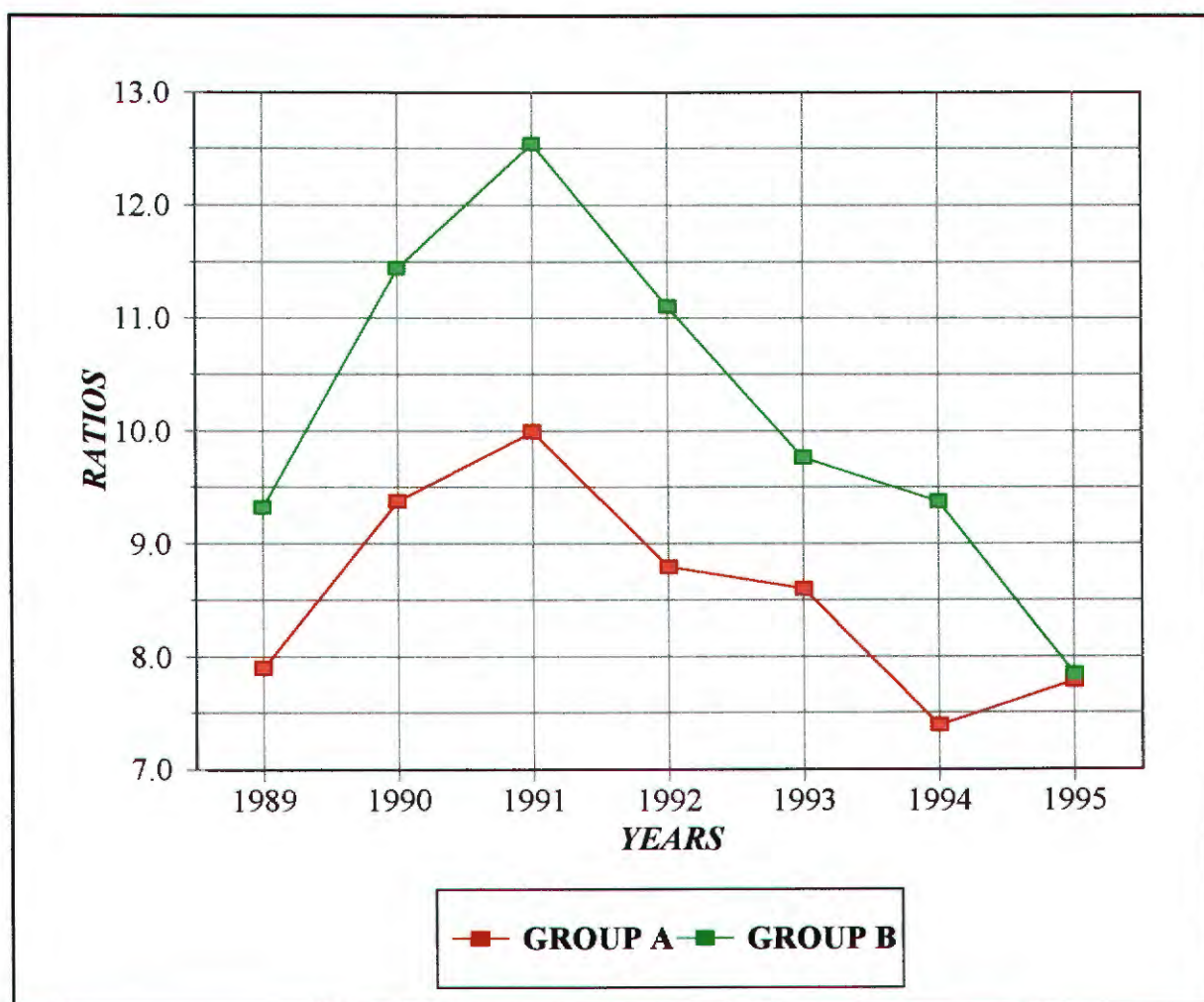


Figure 4.9 : Long-term debt to total assets.

4.2.5 DIVIDEND PAYMENT

Dividend payment is one of the three basic decisions facing financial management. As mentioned in subsection 1.4.4, dividend decisions refer to the decisions which are made in respect of the retention of earnings for re-investment or payment of dividends to shareholders.

Referring to subsection 2.3.2, moreover, it is deemed important to note that the (ir)relevance of a company's dividend policy has been the subject of much debate in the finance literature, with various contradictory statements being formulated.

The key dividend payment ratio analysed here is the dividend pay-out ratio.

4.2.5.1 DIVIDEND PAY-OUT RATIO

The dividend pay-out ratio is obtained by dividing the amount of dividend per share to the earning per share. This ratio facilitates the assessment of the dividend policy adopted by management as well as its impact on the financial conditions of the company.

While a higher dividend pay-out ratio is considered as a sign of financial maturity for well established companies, those with a lower dividend pay-out ratio are considered as being in search of growth through retained earnings.

If the dividend pay-out ratio declines, shareholders may be concerned as they would tend to believe that the company is decreasing dividends due to financial problems.

4.2.5.1.1 Presentation of data

Dividend pay-out data for owner-controlled and management-controlled companies are reflected in Table 4.19 below.

	1989	1990	1991	1992	1993	1994	1995
GROUP A	0.30	0.30	0.37	0.36	0.27	0.29	0.31
GROUP B	0.35	0.38	0.39	0.42	0.41	0.36	0.33

Table 4.19 : Dividend pay-out ratio data.

4.2.5.1.2 Hypothesis-testing

The representation of the null hypothesis to be tested is as follows :

$$H_0 : (10) \quad \mu_{151} = \mu_{251}$$

This means that there is no difference in “dividend pay-out ratio” between owner-controlled and management-controlled companies in South Africa.

Should the above be rejected, the alternative to be confirmed is as follows :

$$H_1 : (10) \quad \mu_{151} \neq \mu_{251}$$

This alternative means that there is a difference in “dividend pay-out ratio” between owner-controlled and management-controlled companies in South Africa.

The application of the pooled-variance *t* test procedure to data contained in Table 4.19, at the $\alpha = .05$ level of significance has produced a set of statistical results reflected in Table 4.20 below.

	<i>Variable 1 (Group A)</i>	<i>Variable 2 (Group B)</i>
Mean	0.3127	0.3777
Variance	0.0013	0.0011
Observations	7.0000	7.0000
Pooled Variance	0.0012	
Hypothesized Mean Difference	0.0000	
df	12.0000	
t	-3.5472	
P(T<=t) two-tail	0.0040	
t Critical two-tail	2.1788	

Table 4.20 : Statistical results on “dividend pay-out ratio” testing.

From the results reflected in Table 4.20 above, the critical values for this two-tailed test are + 2.1788 and - 2.1788.

As $t = -3.5472 < t_{12} = -2.1788$, the null hypothesis $H_0 : (10) \mu_{151} = \mu_{251}$ of no difference in “dividend pay-out ratio” is rejected, with the alternative $H_1 : (10) \mu_{151} \neq \mu_{251}$, stating that there is a difference being confirmed.

4.2.5.1.3 Comparative analysis

Figure 4.10 below depicts a straightforward comparison in dividend pay-out ratio between owner-controlled and management-controlled companies in South Africa. This comparison brings some clarifications in respect of dividend payment theories examined in chapter 2.

Scrutiny of data related to the dividend pay-out ratio as reflected in Table 4.19 reveals that the ratio of management-controlled companies has been higher than that of owner-controlled companies during the entire research period which could be interpreted as a sign of financial maturity on the part of management-controlled companies.

In other words, it can be stated that out of earnings available to shareholders, owner-controlled companies have paid less dividends than their management-controlled counterparts. This could mainly be ascribed to the fact that owner-managers, being capitalists, cannot easily accept to lose their control by issuing new equity but will be willing to undertake financing via debts or retained earnings.

The highest dividend pay-out ratio achieved by management-controlled companies was 0.42 in 1992, with the lowest being 0.33 in 1995. Regarding owner-controlled companies, the summit was attained in 1991 at 0.37 and the bottom in 1993 at 0.27.

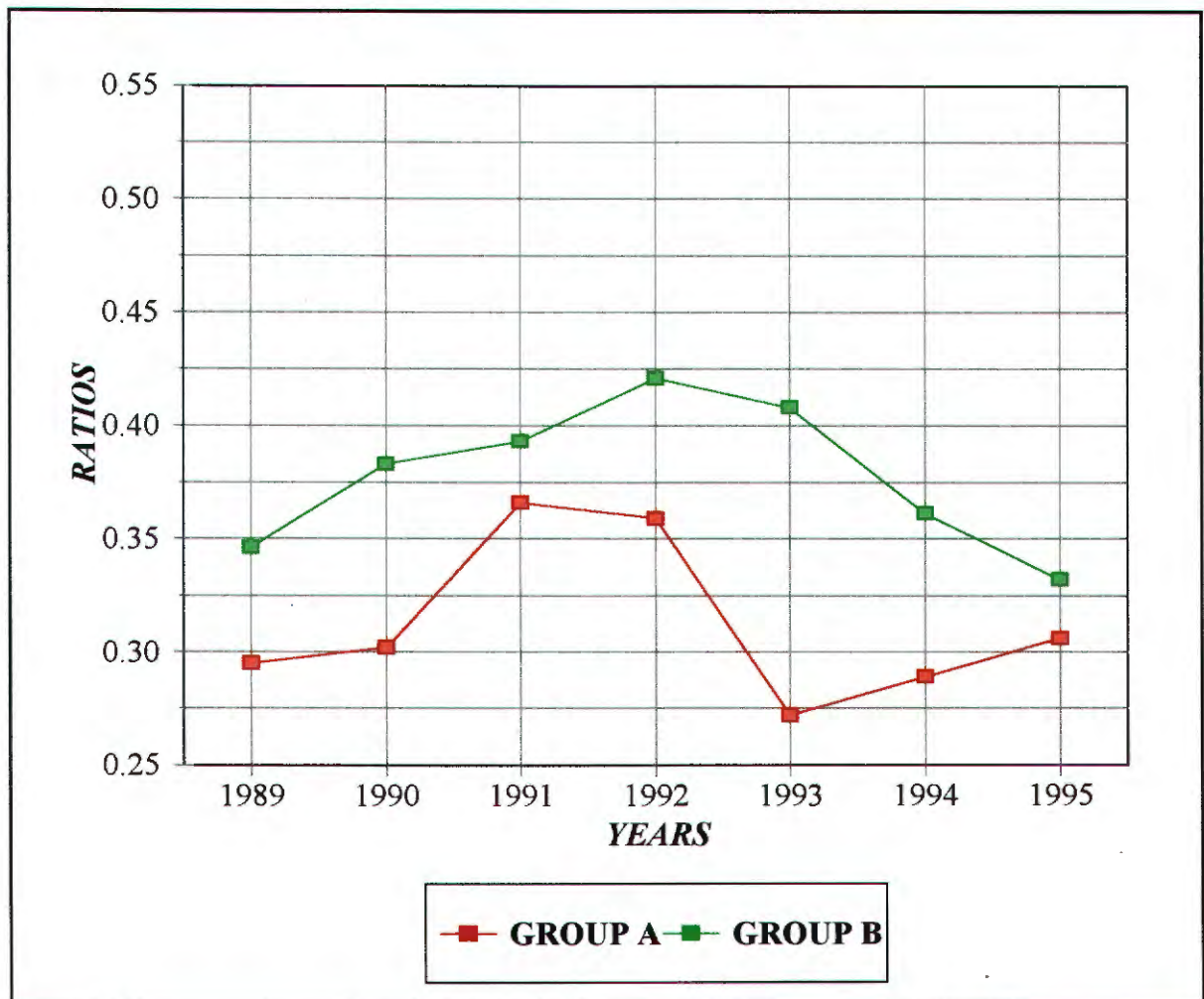


Figure 4.10 : Dividend pay-out ratio.

4.3 CONCLUSION

As demonstrated in this chapter, the application of the pooled-variance t test procedure on data related to the selected financial ratios has led to the rejection of all the statistical equalities representing the null hypothesis, with their alternatives being accepted.

A comparative analysis performed on profitability has indicated that management-controlled companies have been more efficient than their owner-controlled counterparts, as their profit margin on sales, return on total assets and return on equity ratios have been above those of owner-controlled companies throughout the research period.

Although the fixed asset and total asset turnover ratios have highlighted that owner-controlled companies have generated, relative to the level of fixed and total assets used, more sales than their management-controlled counterparts, the impact of this on the net income has been found to be annihilated or reduced by excessive costs which might include, *inter alia*, rentals, high maintenance costs as well as interest charges on debts.

Due to the total debt to equity and total debt to total assets ratios of owner-controlled companies being higher than those of the management-controlled companies, the possibility of the former incurring higher interest charges than the latter could not be excluded. Scrutiny of the long-term debt to total assets in conjunction with other leverage ratios has revealed that owner-controlled companies use more short-term debt in their operations than long-term financing, which has had an impact on their current ratio. In terms of leverage analysis, it can be concluded that management-controlled companies have been more mature financially than their owner-controlled counterparts.

With regard to dividend payment, it has been noted that management-controlled companies have, out of earnings available to shareholders, paid higher dividends than owner-controlled companies. This could mainly be ascribed to the fact that owner-managers, being capitalists, would prefer high retention and low dividends, as they are not willing to lose their control by issuing new equity.

In the light of the above, it is evident that the financial strategies of owner-managers have been different from those adopted by non-owner managers, which has resulted in the financial performance of owner-controlled companies being significantly different from that of the management-controlled ones.

CHAPTER 5

SUMMARY AND CONCLUSIONS

5.1 INTRODUCTION

The financial performance of owner-controlled and management-controlled companies should be identical since the primary management objective should be the maximisation of the wealth of shareholders. However, as demonstrated by Van Horne (1974), the maximisation of the shareholders' wealth is an appropriate guide for how a company should act, but not necessarily how it does act.

Considering the separation of ownership and control, managers do not always have the same relationship with the companies they manage. While owner-controlled companies are managed by their owners, management-controlled companies are being run by non-owners.

It is deemed important to mention that non-owner managers are bureaucrats who owe their positions to their managerial ability instead of ownership. They possess required skills, expertise and qualifications and are expected to run their companies more profitably than owner-managers who generally owe their positions to their ownership.

With all these differences between owner- and non-owner managers, one cannot disregard the possibility of differences in objectives, motivation and strategies which consequently will affect the financial performance.

This study has been designed to establish whether there is a significant difference in financial performance between owner-controlled and management-controlled companies in South Africa, as a result of the separation of ownership and control.

Following the analysis of data, this last chapter concludes the research by reviewing its process, summarising the results and formulating the necessary recommendations. Suggestions for further study and concluding remarks are also presented.

5.2 REVIEW OF THE RESEARCH PROCESS

As demonstrated in chapter 2, theories and literature related to the separation of ownership and control as well as the financial performance of owner-controlled and management-controlled companies have highlighted a variety of contradictions, inconsistencies and inconclusive assumptions.

The impact of the separation of ownership and control on the financial performance has not, as yet, been clearly determined, with certain economists such as Shelton (1967) claiming that owner-controlled companies are more efficient than management-controlled companies whereas others, as demonstrated by Nichols (1969), support the opposite view.

In order to establish whether there is a significant difference in the financial performance of owner-controlled and management-controlled companies in South Africa, this study has used various mathematical and statistical procedures for both the primary treatment of raw data to obtain analysable variables and the hypothesis-testing procedure.

Due to the fact that the study covered the period from 1989 to 1995, it has been deemed imperative for analysable companies to be in operation as listed companies during this period. The identification of companies complying with this requirement has been undertaken through a modern mathematical approach of *intersection* between two sets of elements, one representing companies which were listed as at the beginning of the first year of the research period (1989) and another representing those which were listed as at the end of the last year of the research period (1995).

Following the above phase, cleansing and discarding of anomalies on the obtained results have been performed with a view to eliminating companies with missing, incomplete and/or inappropriate data. Subsequently, remaining companies have been classified as either owner-controlled or management-controlled according to their shareholding structure.

The two samples analysed in this study have been randomly selected from the two categories of companies (owner-controlled and management-controlled) and matched according the standard industrial classification (SIC) in order to avoid the effects of the inter-industry variances, thereby ensuring the accuracy and validity of the analysis.

The specific financial ratios related to the financial aspects under analysis, namely profitability, asset management, liquidity, leverage and dividend payment have been calculated per company and per year throughout the research period. Grouped either as owner-controlled or management-controlled, data have been submitted to a descriptive statistics treatment in order to generate analysable variables.

The research hypothesis has been tested using the pooled-variance *t* test procedure which has been individually applied to each financial ratio in order to establish whether there is a difference between the two groups.

Identified differences have been furthermore subjected to a comparative analysis between the two groups, with graphical illustrations being used to facilitate a straightforward comparison.

5.3 SYNTHESIS OF RESULTS AND FINDINGS

Considering the results obtained from the hypothesis-testing, whereby all the statistical equalities representing the null hypothesis of no difference have been rejected, with their alternatives being consequently accepted, this study has come to a conclusion that there is a significant difference in financial performance between owner-controlled and management-controlled companies in South Africa, as a result of the separation of ownership and control.

A comparative analysis performed on profitability, has indicated that management-controlled companies have been more efficient than their owner-controlled counterparts, as their profit margin on sales, return on total assets and return on equity ratios have been higher than those of owner-controlled companies during the entire research period. This could mainly be ascribed to a more effective cost structure and control.

From the evaluation of the asset management ratios, it has been noted that owner-controlled companies have generated, relative to the level of fixed and total assets used, more sales than their management-controlled counterparts. However, seen in conjunction with the profitability ratios, it appears that the impact of the sales volume on the net income has been found to be annihilated or reduced by excessive costs. This could result from owner-controlled companies leasing and/or using old or fully depreciated assets, with high rentals and/or high maintenance costs being incurred.

In analysing data pertaining to the current ratio, one can conclude that owner-controlled companies have been more liquid than management-controlled companies. Seen in perspective together with profitability and asset management ratios, it appears that owner-controlled companies have been more focussed on current assets/liabilities than on long-term investments.

Due to the total debt to equity and total debt to total assets ratios of management-controlled companies being lower than those of their owner-controlled counterparts, it has been noted that management-controlled companies have been more mature financially than their owner-controlled counterparts. In addition, the possibility of owner-controlled companies incurring, relative to the assets used, higher interest charges than management-controlled companies could not be excluded.

Furthermore, scrutiny of the long-term debt to total assets in conjunction with other leverage ratios as well as the current ratio has revealed that owner-controlled companies use more short-term debt in their operations than long-term financing.

With regard to the payment of dividends, the study has highlighted that management-controlled companies have, out of earnings available to shareholders, paid higher dividends than owner-controlled companies. This could mainly be ascribed to the fact that owner-managers, being capitalists, would prefer high retention and low dividends, as they are not willing to lose their control by issuing new equity.

5.4 RECOMMENDATIONS

In order to improve profitability, managers of owner-controlled companies should analyse their cost items with a view to identifying and eliminating those found unable to add value. The implementation and maintenance of effective cost control mechanisms should be made a priority.

In line with the above, decisions related to leasing or buying of assets should be based on proper evaluation techniques designed to determine the most profitable options for the company. Assets which have become more expensive to maintain and/or operate should be identified, with the most cost-effective decisions, for example replacements, being made when deemed necessary.

Although a low total debt to equity or to total assets ratio indicates less risk, if management can identify profitable investments, additional debt or leverage could make the company more profitable. Nonetheless, it is imperative for management to try to maximise profits without incurring a level of debt which will bring too much risk to the company.

In their long-term financing decisions, owner-controlled companies should establish an optimal capital structure and use it as a target when arranging their finances.

As many shareholders rely on dividends to meet their expenses and are inconvenienced should the dividend stream be unstable, it is preferable for owner-controlled companies to balance their internal needs for funds against the needs of their shareholders. The fact that they always pay lower dividends out of earnings available to shareholders than their management-controlled counterparts does not work in their favour as this can send unattractive signals to investors.

5.5 SUGGESTIONS FOR FURTHER STUDY

This research is considered as a clearing of the ground for further studies in the area of the separation of ownership and control as well as the evaluation of the financial performance of South African companies.

Due to data availability, only industrial companies listed on the Johannesburg Stock Exchange have been selected for analysis and classified as owner-controlled or management-controlled companies in terms of their shareholding structure, with the study covering seven years from 1989 to 1995.

It is deemed necessary for this study to be replicated using a different time period with a view to ensuring the generalisation of its conclusions beyond the period it has covered.

Furthermore, the study should be extended to include a third sample consisting of privately held companies which are managed by their owners. All the three samples to be analysed, namely the privately held companies managed by their owners, listed owner-controlled companies and listed management-controlled companies should also be randomly selected and matched according the standard industrial classification (SIC).

5.6 CONCLUDING REMARKS

This study has established that there is a significant difference in financial performance between owner-controlled and management-controlled companies in South Africa through the analysis of specific financial ratios representing profitability, asset management, liquidity, leverage and dividend payment.

In the light of the hypothesis-testing and comparative analysis results, it has been noted that management-controlled companies have been more efficient and more mature financially than their owner-controlled counterparts, with a dividend pay-out ratio being also higher during the entire research period.

It is believed that this study has enhanced the body of the financial literature by positively contributing to the analysis of the situation in respect of the separation of ownership and control and its impact on the financial performance of South African companies.

The study has, furthermore, provided a better understanding of problems facing companies' management in South Africa and has formulated recommendations for the implementation of corrective and value-adding actions where required.

BIBLIOGRAPHY

1. Baumol, William J. Business Behavior Value and Growth, Revised Edition, New York : Harcourt, Brace & World, Inc., 1967.
2. Berenson, Mark L. and Levine, David M. Business Statistics, New Jersey : Prentice-Hall, Inc., 1998.
3. Berle, Adolf A. and Means, Gardiner C. The Modern Corporation and Private Property, New York : Macmillan co., 1932.
4. Brigham, Eugene F. and Gapenski, Louis C. Intermediate Financial Management, Third Edition, Florida : The Dryden Press, 1990.
5. Burnham, James. The Managerial Revolution, Penguin Books, London, 1962.
6. Cole, Robert H. Consumer and Commercial Credit Management, Ninth Edition, Homewood : Irwin, 1992.
7. Dahrendorf, Ralf. Class and Class Conflict in Industrial Society, London, 1957.
8. Demong, Richard F. An Analysis of the Financial Performance of Privately and Publicly Held Corporations, PhD. Thesis, University of Colorado at Boulder, 1977.
9. Ehrbar, Al. Economic Value Added : The Real Key to Creating Wealth, New York : John Wiley & Sons, Inc., 1998.

10. Furubotn, Eirik G. and Pejovich, Svetozov. "Property Rights and Economic Theory : A Survey of Recent Literature", Journal of Economic Literature, 1972 (1137-1162).
11. Gordon, Myron J. "Optimal Investment and Financing Policy", Journal of Finance, 1963 (264-272).
12. Hilferding, R. Finance Capital, Routledge and Kegan , London, 1981.
13. Jensen, Michael C. and Meckling, William H. "Theory of the Firm : Managerial Behavior, Agency Costs and Ownership Structure", Journal of Financial Economics, 1976 (305-360).
14. Le Roux, E.E., Venter, C.H., Jansen van Vuren, J.E., Kritzing, A.A.C., Ferreira, E.J., de Beer, A.A., Hüber, C.P., Jacobs, H. and Labuschagne, M. Business Management : A Practical Approach, Lexicon Publishers, Johannesburg, 1995.
15. Lee, G.A., Modern Financial Accounting, Second Edition, Nelson Series in Accounting and Finance, Great Britain, 1979.
16. Leibenstein, Harvey. "Allocative Efficiency versus X Efficiency", American Economic Review, 1966 (392-415).
17. Lintner, John. "Dividends, Earnings, Leverage, Stock Prices, and the Supply of Capital to Corporations", Review of Economics and Statistics, 1962 (243-269).
18. Litzenberger, Robert H. and Ramaswamy, Krishna. "The Effects of Personal Taxes and Dividends on Capital Asset Prices", Journal of Financial Economics, 1979 (163-196).

19. Marglin, S. "What do Bosses do ? The Origins and Functions of Hierarchy in Capitalist Production", Review of Radical Political Economics, 1975 (Part II).
20. Miller, Merton H. and Modigliani, Franco. "Dividend Policy, Growth, and the Valuation of Shares", Journal of Business, 1961 (411-433).
21. Monsen, Joseph R. Jr. and Downs, Anthony. "A Theory of Large Managerial Firms", Journal of Political Economy, 1965 (221-236).
22. Neter, J., Wasserman, W. and Whitmore, G.A. Applied Statistics, Second Edition, Boston, Massachusetts : Allyn and Bacon, Inc., 1982.
23. Nichols, Theo. Ownership, Control and Ideology : An Enquiry into Certain Aspects of Modern Business Ideology, London : Allen and Unwin, 1969.
24. Palmer, John. "The Profit Variability Effects of the Managerial Enterprise", Western Economic Journal, 1973 b (228-231).
25. Pitelis, Christos. Corporate Capital : Control, Ownership, Saving, and Crisis, Cambridge, New York : Cambridge University Press, 1987.
26. Shelton, J.P. "Allocative Efficiency versus X Efficiency : Comment", American Economic Review, 1967 (1252-1258).
27. Siegel, Joel G. and Shim, Jae K. Accounting Handbook, Second Edition, Barron' s Educational Series, Inc., 1995.
28. Solow, R.M. "The New Industrial State or Son of Affluence", The Public Interest, 1967.

29. Stano, Miron. "Monopoly Power, Ownership, Control, and Corporate Performance", Bell Journal of Economics, 1976 (672-679).
30. Van Horne, James C. Fundamentals of Financial Management, Second Edition, Englewood Cliffs, New Jersey : Prentice Hall, Inc., 1974.
31. White, Gerald I., Sondhi, Ashwinpaul C. and Fried Dov. The Analysis and Use of Financial Statements, Second Edition, John Wiley & Sons, Inc., 1998.

ANNEXURE

DESCRIPTIVE STATISTICS *

ANNEXURE A1

OWNER-CONTROLLED COMPANIES (GROUP A)

	PRMS89	PRMS90	PRMS91	PRMS92	PRMS93	PRMS94	PRMS95	ROTAS89	ROTAS90	ROTAS91	ROTAS92	ROTAS93	ROTAS94	ROTAS95
Mean	5.159	5.015	3.904	3.185	3.343	4.542	4.319	8.983	7.860	6.193	4.932	5.609	7.760	7.860
Std Error	1.166	1.185	1.035	1.029	0.997	0.837	0.686	1.667	1.207	1.020	1.012	1.182	0.950	0.962
Median	4.061	3.687	2.509	1.584	1.803	3.510	3.672	7.006	6.935	5.428	4.398	3.895	7.045	7.252
Mode	NA	NA	0.000	NA	NA	NA	NA	NA	NA	0.000	NA	NA	NA	NA
Std Dev	5.341	5.432	4.743	4.714	4.567	3.835	3.142	7.637	5.532	4.674	4.637	5.419	4.365	4.406
Variance	28.530	29.510	22.495	22.218	20.862	14.703	9.874	58.324	30.601	21.848	21.498	29.363	18.968	18.417
Kurtosis	5.036	5.804	5.484	6.597	8.244	5.328	0.169	8.763	4.719	2.036	0.232	-0.173	0.101	0.709
Skewness	2.032	2.240	2.442	2.621	2.610	1.980	0.854	2.537	1.673	1.409	0.549	0.426	0.817	0.756
Range	23.507	23.962	18.382	22.061	21.011	16.840	11.325	38.849	27.052	18.227	18.481	21.138	16.524	17.576
Minimum	-1.208	-0.723	0.000	-1.821	-1.229	0.482	0.668	-2.252	-1.471	0.000	-2.821	-5.102	1.465	1.541
Maximum	22.599	23.239	18.382	20.240	19.782	17.322	11.891	38.897	25.581	18.227	15.660	16.036	17.989	19.118
Sum	108.343	105.306	81.984	66.878	70.207	95.391	90.701	188.639	165.054	130.044	103.575	117.781	162.967	165.058
Count	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000
Conf Lvl(0.95000)	2.285	2.323	2.029	2.018	1.854	1.640	1.344	3.266	2.366	1.999	1.983	2.318	1.863	1.885

MANAGEMENT-CONTROLLED COMPANIES (GROUP B)

	PRMS89	PRMS90	PRMS91	PRMS92	PRMS93	PRMS94	PRMS95	ROTAS89	ROTAS90	ROTAS91	ROTAS92	ROTAS93	ROTAS94	ROTAS95
Mean	5.888	5.188	4.988	4.631	5.094	5.360	5.757	10.505	9.109	8.723	7.809	8.253	8.694	9.506
Std Error	0.571	0.588	0.514	0.619	0.614	0.656	0.683	0.782	0.639	0.660	0.676	0.768	0.914	0.873
Median	5.639	4.651	4.398	4.236	4.905	5.337	5.061	10.889	9.615	8.837	7.692	8.397	9.039	9.487
Mode	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Std Dev	2.617	2.608	2.355	2.836	2.814	3.004	3.132	3.584	2.927	3.023	4.015	3.520	4.188	4.000
Variance	6.848	6.800	5.546	8.044	7.918	9.026	9.808	12.845	8.570	9.141	16.117	12.392	17.526	15.997
Kurtosis	-0.031	4.367	1.185	0.052	0.136	-0.138	1.297	3.144	-0.395	1.010	0.993	0.513	0.932	2.235
Skewness	0.300	1.630	0.925	0.789	0.862	0.332	0.959	0.302	-0.382	-0.289	0.486	0.265	0.224	0.445
Range	10.374	12.619	9.467	9.854	9.497	10.693	13.209	18.720	11.248	13.779	17.488	14.473	17.822	19.694
Minimum	0.535	0.841	1.162	0.513	1.504	0.526	0.192	1.661	2.764	1.662	0.766	2.230	0.898	0.289
Maximum	10.909	13.460	10.618	10.367	11.001	11.219	13.401	20.380	14.012	15.440	16.254	16.704	18.720	19.983
Sum	123.652	108.945	104.747	98.292	106.976	112.558	120.866	220.607	191.295	183.181	163.998	173.321	182.571	199.623
Count	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000
Conf Lvl(0.95000)	1.119	1.115	1.007	1.213	1.203	1.285	1.339	1.533	1.252	1.293	1.717	1.506	1.791	1.711

* PRMS = PROFIT MARGIN ON SALES

* ROTAS = RETURN ON TOTAL ASSETS

DESCRIPTIVE STATISTICS (CONTD.) *

ANNEXURE A2

OWNER-CONTROLLED COMPANIES (GROUP A)

	ROEQ89	ROEQ90	ROEQ91	ROEQ92	ROEQ93	ROEQ94	ROEQ95	FASTR89	FASTR90	FASTR91	FASTR92	FASTR93	FASTR94	FASTR95
Mean	18.715	15.848	13.878	10.393	11.902	18.483	17.797	21.644	10.870	10.053	11.344	13.040	13.841	17.049
Std Error	2.428	1.924	1.896	1.860	2.066	1.543	2.057	8.778	3.572	2.731	3.560	3.847	4.538	6.477
Median	18.190	13.864	14.599	12.739	11.290	18.079	14.319	7.750	5.681	6.298	6.831	6.830	7.329	7.364
Mode	NA	NA	0.000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Std Dev	11.125	8.816	9.148	8.525	9.487	7.072	9.427	40.224	16.369	12.515	16.314	17.629	20.795	29.681
Variance	123.768	77.718	83.694	72.671	89.818	50.010	88.862	1617.944	287.949	156.622	266.140	310.774	432.418	880.839
Kurtosis	2.537	0.393	-0.079	-0.468	-0.512	-0.760	-0.460	8.484	14.721	10.551	10.104	4.562	6.268	7.122
Skewness	0.719	0.125	0.700	-0.058	-0.295	-0.413	0.349	2.897	3.641	3.023	3.104	2.321	2.664	2.849
Range	55.407	35.365	34.791	31.082	35.452	25.395	35.970	184.088	75.860	55.838	70.637	60.787	73.821	107.986
Minimum	-6.024	-3.750	0.000	-5.458	-8.929	2.247	2.667	1.182	1.286	1.421	1.139	1.005	1.233	1.359
Maximum	49.383	31.615	34.791	25.624	26.524	27.642	38.636	185.250	77.146	57.359	71.776	61.791	75.054	109.344
Sum	393.015	349.572	291.445	218.259	249.833	346.150	373.746	454.527	228.270	211.108	238.228	273.845	290.657	358.032
Count	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000
Conf Lvl(0.95000)	4.758	3.771	3.913	3.646	4.049	3.025	4.032	17.204	7.001	5.353	6.977	7.540	8.894	12.694

MANAGEMENT-CONTROLLED COMPANIES (GROUP B)

	ROEQ89	ROEQ90	ROEQ91	ROEQ92	ROEQ93	ROEQ94	ROEQ95	FASTR89	FASTR90	FASTR91	FASTR92	FASTR93	FASTR94	FASTR95
Mean	23.417	20.685	19.554	17.442	17.639	18.811	19.699	7.281	6.267	6.169	5.984	5.870	5.863	6.322
Std Error	1.705	1.556	1.601	2.063	1.688	2.102	1.732	1.050	0.802	0.834	0.924	0.876	0.841	0.959
Median	23.016	19.591	20.349	17.608	18.164	18.192	18.651	5.455	4.988	5.005	4.591	5.523	4.421	5.689
Mode	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Std Dev	7.815	7.129	7.338	9.545	7.734	9.632	7.938	4.814	3.675	3.820	4.234	4.014	3.853	4.398
Variance	61.069	50.819	53.840	91.114	59.821	92.769	63.019	23.171	13.508	14.592	17.929	16.112	14.842	19.324
Kurtosis	0.284	-0.983	-0.025	-0.248	-0.475	0.063	0.703	0.897	-0.720	-0.132	2.364	5.055	6.256	9.551
Skewness	0.250	0.133	-0.265	0.239	-0.051	0.217	-0.116	1.167	0.681	0.923	1.615	1.972	2.100	2.614
Range	31.940	24.671	28.925	35.980	27.903	38.419	35.152	18.695	11.458	12.981	16.306	17.818	17.816	21.472
Minimum	10.373	7.897	2.893	1.786	4.569	1.802	0.840	1.150	1.133	1.191	1.127	1.184	1.230	1.137
Maximum	42.313	32.569	31.817	37.765	32.472	40.221	35.993	19.844	12.591	14.172	17.433	19.000	19.045	22.609
Sum	491.766	434.388	410.630	368.279	370.429	395.029	413.685	152.909	131.601	129.551	125.654	123.262	123.125	132.755
Count	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000
Conf Lvl(0.95000)	3.342	3.049	3.138	4.083	3.308	4.119	3.395	2.059	1.572	1.634	1.811	1.717	1.648	1.880

* ROEQ = RETURN ON EQUITY

* FASTR = FIXED ASSET TURNOVER

DESCRIPTIVE STATISTICS (CONTD.) *

ANNEXURE A3

OWNER-CONTROLLED COMPANIES (GROUP A)

	TASTR89	TASTR90	TASTR91	TASTR92	TASTR93	TASTR94	TASTR95	CURAT89	CURAT90	CURAT91	CURAT92	CURAT93	CURAT94	CURAT95
Mean	2.804	2.333	2.292	2.267	2.471	2.445	2.460	1.662	1.621	1.582	1.578	1.717	1.606	1.731
Std Error	0.565	0.346	0.328	0.318	0.371	0.427	0.391	0.160	0.215	0.170	0.136	0.216	0.158	0.177
Median	1.865	1.833	1.800	1.827	1.841	1.783	1.975	1.436	1.366	1.424	1.462	1.409	1.416	1.447
Mode	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Std Dev	2.588	1.586	1.501	1.457	1.698	1.955	1.790	0.735	0.984	0.780	0.623	0.990	0.726	0.811
Variance	6.698	2.516	2.254	2.122	2.883	3.821	3.204	0.540	0.969	0.609	0.388	0.979	0.527	0.658
Kurtosis	5.869	1.991	1.725	2.231	1.742	4.829	5.563	0.328	4.200	4.797	0.482	5.563	6.162	2.051
Skewness	2.349	1.701	1.660	1.755	1.631	2.270	2.258	1.211	2.086	1.839	0.906	2.145	2.262	1.536
Range	10.897	5.705	4.936	5.216	5.949	7.825	7.680	2.427	3.713	3.472	2.281	4.236	3.200	3.111
Minimum	0.585	0.750	0.830	0.774	0.721	0.751	0.713	0.804	0.715	0.653	0.773	0.797	0.870	0.851
Maximum	11.471	6.455	5.765	5.990	6.670	8.578	8.393	3.231	4.429	4.125	3.054	5.033	4.070	3.962
Sum	58.893	48.993	48.129	47.597	51.899	51.342	51.657	34.906	34.046	33.212	33.141	36.052	33.722	36.342
Count	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000
Conf Lvl(0.95000)	1.107	0.678	0.642	0.623	0.726	0.836	0.766	0.314	0.421	0.334	0.287	0.423	0.310	0.347

MANAGEMENT-CONTROLLED COMPANIES (GROUP B)

	TASTR89	TASTR90	TASTR91	TASTR92	TASTR93	TASTR94	TASTR95	CURAT89	CURAT90	CURAT91	CURAT92	CURAT93	CURAT94	CURAT95
Mean	1.967	1.953	1.887	1.783	1.765	1.768	1.803	1.489	1.544	1.609	1.575	1.582	1.620	1.608
Std Error	0.121	0.132	0.120	0.108	0.116	0.112	0.113	0.101	0.115	0.133	0.119	0.115	0.128	0.123
Median	1.847	1.793	1.868	1.797	1.712	1.728	1.750	1.373	1.449	1.537	1.501	1.533	1.669	1.582
Mode	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Std Dev	0.552	0.604	0.548	0.493	0.532	0.513	0.519	0.464	0.528	0.608	0.544	0.527	0.586	0.565
Variance	0.305	0.365	0.300	0.243	0.283	0.263	0.269	0.216	0.279	0.370	0.296	0.278	0.343	0.319
Kurtosis	0.118	0.336	0.821	1.970	1.208	0.950	0.121	7.015	7.145	9.822	6.178	4.504	4.218	2.444
Skewness	0.318	0.445	0.483	0.896	0.766	0.573	-0.007	2.208	2.229	2.739	1.846	1.587	1.437	1.173
Range	2.270	2.442	2.324	2.288	2.175	2.052	2.064	2.131	2.437	2.874	2.632	2.446	2.651	2.426
Minimum	0.831	0.846	0.888	0.850	0.849	0.848	0.738	0.985	0.961	1.005	0.783	0.837	0.840	0.850
Maximum	3.101	3.288	3.213	3.139	3.024	2.900	2.802	3.116	3.398	3.880	3.416	3.283	3.491	3.276
Sum	41.307	41.014	39.636	37.435	37.074	37.121	37.869	31.271	32.415	33.796	33.081	33.219	34.025	33.771
Count	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000
Conf Lvl(0.95000)	0.236	0.258	0.234	0.211	0.228	0.219	0.222	0.189	0.228	0.260	0.233	0.228	0.251	0.242

* TASTR = TOTAL ASSET TURNOVER

* CURAT = CURRENT RATIO

DESCRIPTIVE STATISTICS (CONTD.) *

ANNEXURE A4

OWNER-CONTROLLED COMPANIES (GROUP A)

	DE/EQ89	DE/EQ90	DE/EQ91	DE/EQ92	DE/EQ93	DE/EQ94	DE/EQ95	TODAS89	TODAS90	TODAS91	TODAS92	TODAS93	TODAS94	TODAS95
Mean	148.530	147.877	141.258	138.888	134.240	130.510	144.301	53.095	53.397	54.669	53.754	52.654	53.533	54.322
Std Error	26.542	26.588	17.745	21.298	20.943	18.532	19.912	3.526	3.404	2.787	2.946	2.972	2.797	3.645
Median	124.138	114.050	121.538	102.899	101.471	105.905	128.505	55.365	53.465	54.861	50.896	50.365	54.034	58.089
Mode	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Std Dev	121.630	121.740	81.319	97.599	95.974	75.759	91.248	16.157	15.601	12.680	13.501	13.617	12.817	16.704
Variance	14793.916	14820.672	6612.758	9525.509	9211.007	5739.416	8326.139	261.050	243.389	160.789	182.288	185.427	164.278	279.015
Kurtosis	9.573	7.719	1.649	6.267	6.453	1.609	-0.106	-0.195	0.575	-0.357	-0.293	-0.479	-0.479	-0.567
Skewness	2.712	2.513	1.364	2.262	2.230	1.385	0.830	-0.264	-0.193	0.007	0.265	0.333	-0.008	-0.503
Range	587.500	558.095	315.666	430.246	420.438	298.433	320.721	62.094	67.465	47.206	53.056	51.132	49.149	58.822
Minimum	30.417	21.905	45.528	41.608	45.333	38.855	22.973	23.323	17.829	31.111	29.457	31.193	27.983	18.640
Maximum	597.917	580.000	361.194	471.852	465.772	337.288	343.694	65.417	85.294	78.317	82.513	82.325	77.132	77.462
Sum	3077.121	3105.418	2966.420	2916.599	2819.049	2740.717	3030.330	1114.985	1121.327	1148.025	1128.830	1105.741	1124.192	1140.753
Count	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000
Conf Lvl(0.950000)	52.021	52.068	34.780	41.743	41.048	32.402	39.027	6.910	6.873	5.423	5.775	5.824	5.482	7.144

MANAGEMENT-CONTROLLED COMPANIES (GROUP B)

	DE/EQ89	DE/EQ90	DE/EQ91	DE/EQ92	DE/EQ93	DE/EQ94	DE/EQ95	TODAS89	TODAS90	TODAS91	TODAS92	TODAS93	TODAS94	TODAS95
Mean	138.174	137.380	129.288	125.414	119.352	122.784	118.698	53.850	53.618	53.223	52.234	51.088	51.378	50.920
Std Error	21.271	20.221	16.907	16.903	15.420	18.625	15.156	2.680	2.783	2.347	2.427	2.493	2.685	2.602
Median	127.155	108.201	113.982	103.588	101.374	111.537	105.365	55.948	51.989	53.267	50.900	50.341	52.738	51.301
Mode	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Std Dev	97.478	92.687	77.478	77.458	70.862	76.185	69.452	12.329	12.752	10.756	11.123	11.423	12.303	11.923
Variance	9501.978	8587.083	6002.870	5999.726	4993.073	5804.086	4823.585	152.011	162.604	115.683	123.715	130.468	151.368	142.155
Kurtosis	13.326	9.940	8.885	4.706	4.032	5.062	5.728	1.776	0.725	0.597	0.737	0.079	-0.379	-0.217
Skewness	3.305	2.765	2.773	2.201	1.982	2.035	2.057	-0.134	0.006	0.591	0.872	0.709	0.451	0.329
Range	485.868	443.763	360.666	301.052	277.737	318.223	305.689	59.799	58.270	43.960	42.166	41.406	44.076	46.856
Minimum	38.726	40.304	58.140	56.186	55.028	53.140	47.195	24.191	24.608	36.765	35.974	35.485	34.700	32.063
Maximum	524.592	484.067	418.806	357.238	332.785	371.363	352.883	83.990	82.879	80.725	78.140	76.893	78.776	77.919
Sum	2901.657	2884.973	2715.045	2633.690	2506.391	2578.459	2462.654	1130.840	1125.970	1117.573	1096.911	1072.838	1078.934	1069.318
Count	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000
Conf Lvl(0.950000)	41.891	39.633	33.137	33.129	30.222	32.584	29.705	5.273	5.454	4.600	4.757	4.886	5.262	5.099

* DE/EQ = TOTAL DEBT TO EQUITY

* TODAS = TOTAL DEBT TO TOTAL ASSETS

DESCRIPTIVE STATISTICS (CONTD) *

ANNEXURE A5

OWNER-CONTROLLED COMPANIES (GROUP A)

	LTDAS89	LTDAS90	LTDAS91	LTDAS92	LTDAS93	LTDAS94	LTDAS95	DIVPY89	DIVPY90	DIVPY91	DIVPY92	DIVPY93	DIVPY94	DIVPY95
Mean	7.896	9.377	9.994	8.793	8.601	7.398	7.783	0.295	0.302	0.366	0.359	0.272	0.289	0.306
Std Error	1.450	1.262	1.386	1.268	1.639	1.313	1.434	0.039	0.032	0.045	0.047	0.037	0.032	0.031
Median	7.259	8.108	8.567	8.571	6.900	6.983	6.581	0.325	0.327	0.353	0.323	0.305	0.278	0.295
Mode	0.000	NA	NA	NA	NA	0.000	0.000	0.294	0.000	0.000	0.000	0.000	0.000	0.000
Std Dev	6.646	5.785	6.352	5.812	7.510	6.015	6.571	0.178	0.146	0.206	0.214	0.168	0.148	0.144
Variance	44.167	33.464	40.349	33.778	56.402	36.185	43.179	0.032	0.021	0.042	0.046	0.028	0.022	0.021
Kurtosis	0.355	-0.646	-0.528	-0.956	4.938	-0.238	-0.918	6.158	0.793	2.997	2.175	-0.419	0.112	1.890
Skewness	0.859	0.395	0.501	0.437	1.674	0.689	0.551	-2.105	-1.100	0.779	0.505	-0.311	0.330	0.730
Range	22.535	19.684	22.007	18.548	32.782	20.488	20.692	0.856	0.505	0.968	0.952	0.565	0.600	0.661
Minimum	0.000	0.884	0.667	0.476	0.364	0.000	0.000	-0.303	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	22.535	20.567	22.674	19.024	33.146	20.488	20.692	0.553	0.505	0.968	0.952	0.565	0.600	0.661
Sum	165.824	196.928	209.864	184.645	180.621	155.150	163.443	6.200	6.344	7.677	7.549	5.720	6.078	6.433
Count	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000
Conf Lvl(0.95000)	2.842	2.474	2.717	2.468	3.212	2.573	2.910	0.076	0.062	0.088	0.092	0.072	0.063	0.062

MANAGEMENT-CONTROLLED COMPANIES (GROUP B)

	LTDAS89	LTDAS90	LTDAS91	LTDAS92	LTDAS93	LTDAS94	LTDAS95	DIVPY89	DIVPY90	DIVPY91	DIVPY92	DIVPY93	DIVPY94	DIVPY95
Mean	9.320	11.438	12.541	11.096	9.781	9.371	7.843	0.346	0.383	0.383	0.421	0.408	0.381	0.332
Std Error	1.262	1.756	1.888	1.736	1.706	1.881	1.798	0.027	0.026	0.030	0.060	0.060	0.030	0.027
Median	7.864	10.236	13.176	8.678	9.058	6.515	4.744	0.384	0.400	0.383	0.383	0.377	0.380	0.373
Mode	NA	NA	NA	NA	NA	NA	NA	0.000	NA	NA	0.000	0.000	0.000	0.000
Std Dev	5.782	8.045	8.650	7.955	7.817	8.622	8.238	0.123	0.121	0.137	0.276	0.276	0.139	0.124
Variance	33.434	64.729	74.819	63.278	61.100	74.332	67.860	0.016	0.015	0.019	0.076	0.076	0.019	0.015
Kurtosis	-0.555	2.340	-0.790	-1.009	-0.632	0.397	3.674	2.625	0.020	0.712	9.362	10.792	1.237	1.255
Skewness	0.736	1.244	0.396	0.600	0.727	1.105	1.833	-0.698	0.334	0.695	2.521	2.781	-0.630	-0.907
Range	19.005	34.321	30.430	24.633	25.226	30.575	32.850	0.614	0.458	0.570	1.438	1.452	0.588	0.528
Minimum	1.359	0.856	1.061	1.182	0.829	0.785	0.629	0.000	0.172	0.160	0.000	0.000	0.000	0.000
Maximum	20.364	35.177	31.490	25.815	26.055	31.361	33.579	0.614	0.630	0.730	1.438	1.452	0.588	0.528
Sum	195.716	240.208	263.351	233.013	204.979	196.782	164.713	7.271	8.050	8.263	8.833	8.558	7.584	6.965
Count	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000	21.000
Conf Lvl(0.95000)	2.473	3.441	3.700	3.402	3.343	3.697	3.523	0.053	0.052	0.059	0.118	0.118	0.059	0.053

* LTDAS = LONG-TERM DEBT TO TOTAL ASSETS

* DIVPY = DIVIDEND PAY-OUT RATIO