

# The performance of owner- managed compared to non-owner managed companies listed on the JSE

---

Garth Jones

A research Project submitted to the Gordon Institute of Business Science, University of  
Pretoria, in partial fulfilment of the requirements for the degree of Master of Business  
Administration

14 November 2007

## **Abstract**

This paper investigates whether there is a difference in the investor returns of companies listed on the Johannesburg Stock Exchange. The analysis covers companies listed in the financial and industrial sectors during the period January 2002 to June 2007 and looks at overall returns, returns through share price changes and returns through dividend distributions. The purpose is to gain insight into whether ownership structure has an effect on company returns and to expand the information base that investors can draw on when assessing opportunities.

In performing this research company management and ownership information has been used to categorise companies as owner-managed or non-owner managed and then share price data, dividend distributions have been used to calculate investor returns on a quarterly basis. This allowed descriptive analysis and hypothesis testing to be performed on the data to identify differences and then the statistical significance of any of these differences.

The results obtained indicate that there are no statistically significant differences in the overall returns between the two groups but that differences between the two groups of companies do exist, primarily in the makeup of the returns rather than an overall difference in returns. In drawing these conclusions, it became apparent that further questions have arisen, particularly related to the reasons for the difference in nature of the returns. This begs for further investigation.

## **Declaration**

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other university.

---

Garth Jones

## **Acknowledgements**

I would like to thank my supervisor, Professor Adrian Saville, for the patience he displayed and the assistance he gave to me during the year. I would also like to thank my fiancée, Bernice, for motivating me when I most needed it. Lastly to thank those that helped me with the proof reading and polishing of the final document.

## Contents

Chapter 1 - Introduction.....	1
1.1. Research Problem.....	1
1.2. Research Aim .....	2
Chapter 2 - Literature Review .....	3
2.1. Separation of ownership and control.....	4
2.1.1. Agency Theory .....	5
2.1.2. Incentives to control agency relationships.....	8
2.1.3. Stewardship theory – the counter argument .....	9
2.2. Company Structure.....	10
2.3. Criteria of Performance.....	13
2.3.1. Tobin’s Q.....	13
2.3.2. Inconsistency of measures used in research .....	14
2.3.3. Accuracy of performance measures.....	14
2.3.4. Company performance from the investor’s perspective.....	15
2.4. Room for debate .....	16
Chapter 3 - Research Questions and Hypotheses .....	18
3.1. Arbitrage Pricing Theory .....	18
3.2. Research Question.....	20
3.2.1. Question 1 .....	20
3.2.2. Question 2 .....	20
3.2.3. Question 3.....	20

3.1. Hypotheses .....	21
3.1.1. Share price changes - hypothesis 1 .....	21
3.1.2. Dividend distributions – hypothesis 2 .....	22
3.1.3. Combined returns – hypothesis 3.....	22
3.2. Conclusion.....	23
Chapter 4 - Research Method .....	24
4.1. Research Design.....	24
4.2. Unit of Analysis .....	25
4.3. Population and Sample.....	25
4.4. Data requirements and collection process.....	26
4.5. Data Analysis Approach .....	27
4.6. Descriptive Statistics .....	30
4.7. Statistical inference .....	31
4.7.1. Population and sample .....	31
4.8. Research Limitations.....	32
Chapter 5 - Results.....	33
5.1. Grouping of the companies .....	33
5.1.1. Identifying the controlling shareholder.....	33
5.1.2. Company Management .....	34
5.1.3. Identifying ownership structure .....	34
5.2. Share price data .....	35
5.2.1. Cleaning of data .....	35
5.3. Final data set .....	37
5.4. Descriptive Analysis .....	38
5.4.1. Growth rates for share prices during the period .....	38

5.4.2.	Returns due to dividend distributions during the period.....	40
5.4.3.	Combined returns during the period .....	41
5.5.	Cumulative Returns.....	43
5.6.	Statistical Inference .....	45
5.6.1.	Share price changes .....	46
5.6.2.	Dividend distributions.....	49
5.6.3.	Combined returns.....	52
Chapter 6 - Discussion of Results.....		55
6.1.	Statistical Inference .....	55
6.1.1.	Combined Returns .....	55
6.1.2.	Returns through price changes.....	56
6.1.3.	Returns through dividend distributions.....	57
6.2.	Descriptive Statistics .....	58
6.2.4.	Combined Returns .....	58
6.2.5.	Returns through price changes.....	60
6.2.6.	Returns through dividend distributions.....	62
6.3.	Agency theory .....	62
6.4.	Agency costs .....	63
6.5.	Incentives .....	64
6.6.	Earnings for growth and earnings for distribution .....	65
6.6.1.	Maturity of the company.....	65
6.6.2.	The agency relationship.....	66
6.7.	Nature of Returns .....	67
Chapter 7 - Conclusion .....		68
7.1.	Recommendations to Investors .....	69

7.2. Recommendations for future research .....	69
References.....	71
Appendix 1 – All companies forming the sample .....	73
Appendix 2 – Final group lists.....	78
Appendix 3 – Growth due to share price changes .....	81
Appendix 4 – Returns due to dividends.....	87
Appendix 5 – Combined returns.....	93
Appendix 6 – Quarter ending share prices.....	99
Appendix 7 – Quarterly dividend distributions .....	105
Appendix 8 – Statistical analysis report for share price changes .....	111
Appendix 9 - Statistical analysis report for dividend returns .....	115
Appendix 10 - Statistical analysis report for combined returns.....	119



## Table of Figures

Figure 1 - Quarterly returns due to share price changes .....	39
Figure 2 - Quarterly returns due to dividend distributions .....	41
Figure 3 - Combined quarterly returns .....	43
Figure 4 - Cumulative returns due to share price changes.....	44
Figure 5 - Cumulative returns due to dividend distributions .....	44
Figure 6 - Cumulative combined returns .....	45

## **Chapter 1 - Introduction**

Agency theory suggests that owner-managed companies are likely to provide better shareholder value than non-owner managed companies. (Berle and Means, 1932). The reasoning being that as an owner and manager, the manager will run the company in a way which benefits the owner, himself. The same is not true in non-owner managed businesses as the manager is only an agent of the owner. This is thought to influence the manner in which the company is run because the manager, being a non-owner, will run the company in a way which is likely to benefit him rather than the owners. It may be that the objectives in both cases are one and the same thing and no difference can be found (Demsetz, 1983), however agency theory suggests the opposite. A comparison between the two types of company will throw more light on this.

### **1.1. Research Problem**

Ownership structure of corporations and how it affects a firm's performance has been coming under more scrutiny recently and much research has been carried out in this area. The literature is not consistent, with conflicting observations of the correlation between performance and family ownership. For example, Demsetz (1983) observes that the agency effect does not exist in US firms in the Fortune 500 list, Anderson and Reeb (2003) find the opposite for firms in the S&P 500 index. It is reasonable to conclude that the results are highly specific to the period in which the analysis was done and that there are other factors such as the definition of owner-managed, the criteria used to assess company performance, period effects and country effects. It can be assumed then that research in this area has specific relevance only. Investors wanting to

invest in JSE listed firms would be prudent not to make use of the results of research in other countries. Despite the issue of how ownership structure affects performance still being relevant, local research is meagre. Shung, Stadler and Affleck-Graves (2002) investigated the performance of family controlled companies on the Johannesburg Stock Exchange (JSE) but the analysis was for the period 1975 to 1984, and for companies in the industrial and financial sectors. Bearing in mind the changes which have taken place in South Africa after this period, there is good reason for a similar study to be done in the post 1994 period.

## **1.2. Research Aim**

In light of the inconsistent results presented in the literature, investors in JSE listed companies are unable to extract value from research done in other countries. The limited research done on JSE listed companies leaves a gap which can be filled, at least partially, by this research. The research will give the local investors more understanding of how the ownership structure of JSE listed firms has affected their performance in the recent past which will allow for better investment decisions into the future. The research is specifically aimed at providing more information for investors and the choice of the criteria of performance in this research reflects this.

## Chapter 2 - Literature Review

The Industrial Revolution of the 18th and early 19th centuries saw industrial productivity increase dramatically. The driving force behind this was the increased use of machinery and the new-found means of powering it. It is commonly thought that a revolution is a dramatic event which occurs suddenly and over a very short period of time. A more accurate definition does not take account of time but refers primarily to the depth of the changes that occur. The Industrial Revolution took almost two centuries to play out but the advances which were made in industry, and the changes which were consequently needed in business to accommodate the advances, were profound. To take advantage of the new machinery and the economies of scale which they promised, companies needed to invest ever-increasing sums of money in purchasing capital equipment. In simple terms, you needed money to make money. Companies were not necessarily able to fund this expenditure themselves and so outside sources of funding were needed. There were, of course, advances made in the banking systems of the time but business really needed the ability to source funds from the general public (Landes, 1999).

Even in the early-19th century, the environment was so regulated, particularly in Britain that for example, each joint stock company had to approach the Crown to confer them limited liability. The majority of companies were thus severely restricted in the way they could fund expansions or new ventures. It was only in 1856 that Great Britain allowed the routine registration of public companies and they led the world in this regard by 10 to 15 years. It was at this stage, in the mid to late 19<sup>th</sup> century, that a new era was born, an era in which separation of the ownership and the control of public

companies started to become more pronounced (Landes, 1999). The continued modernisation of banking systems and the advances made in the trade and ownership of companies through institutions such as stock exchanges, has created the possibility for more separation between ownership and control of companies than ever before.

## **2.1. Separation of ownership and control**

In the late 1700s Adam Smith wrote in *The Wealth of Nations* (1976, 824):

“...in every great monarchy in Europe the sale of the crown lands would produce... a much greater revenue than any which those lands have ever afforded to the crown. When the Crown lands had become private property, they would, in the course of a few years, become well improved and well cultivated.”

In this he was referring to the widely held notion that private enterprise is better positioned to allocate capital efficiently than the state or government. The reasoning behind the statement is that private enterprise is exposed to market forces which the state-owned entity would not be. This creates a desire for privately owned companies to become more efficient in their pursuit of generating greater profits (or to avoid bankruptcy). The consequence is that private companies make a greater effort to allocate capital effectively. There are elements of this argument that also hold true when looking at the separation of ownership and control in privately owned companies.

A further aspect of Smith's reasoning is directly related to the remoteness of ownership, suggesting that the separation of ownership and control, with little incentive for those in control to manage in a way which satisfies the interests of those who own, was a less desirous structure of ownership than a much closer relationship between the owner and the business entity. Naturally, the closest possible relationship is that of the owner-manager and possibly the greatest separation of ownership and control is that of the population of a country and the nationalised company or state-owned enterprise. The ability of an individual in the population to influence the operation of a state-owned enterprise is totally insignificant despite the fact that a nationalised asset is theoretically owned by the population. This opens up the debate over what effect ownership structure has on the performance of companies. Some countries have opted for the state-owned enterprise as the bastion of industry, while others have taken a similar view to Smith's and privatised as many companies as possible. In attempting to find the ownership structure which provides the greatest efficiency, and hence returns, there might be a temptation to utilise a compromise in ownership structure, something which incorporates elements of both of these extremes. This is not a solution either as there is not a smooth continuum of possible ownership structures linking these two extremes, as some may wish to think. There is a natural discontinuity at the point where the owner gives up control of the business entity to an agent. Companies fall either on one side of the discontinuity or the other as they are mutually exclusive groups.

### ***2.1.1. Agency Theory***

Theories abound about which type of ownership structure produces the best performing companies. The most widely applied theory in the case of ownership structure of companies is agency theory. Agency theory is used to explain the relationship between

the owner and the individual in control of a company and is often used to defend the notion that owner-managed companies are better performing than non-owner managed companies, or at least that there are additional costs associated with the employment of a professional manager to run the business in place of the owner. The basis of this theory is the agency relationship.

An agency relationship is defined as a contract under which a principal (one or more persons) contractually engages an agent to perform services on their behalf which must include the delegation of some decision making authority to the agent (Jensen and Meckling, 1976). This has particular interest when the principal is the owner of a company and the agent is the chief executive officer (CEO) or at least an executive director of the company.

The assumption that both parties, principal and agent, are utility maximisers (i.e. striving to maximise their own rewards) is key to the theory and since maximising utility for the agent is not an automatic consequence of maximising utility for the principal, it follows then that the decisions made by an agent will not necessarily be consistent with the maximisation of wealth (and hence utility) of the principal. The relationship between principal and agent therefore requires manipulation so that it is beneficial for the agent to adjust his behaviour in a way that causes the utility of the principal to be maximised. The process of manipulation of the relationship is achieved through the offering of incentives and by monitoring behaviour, both of which have costs associated with them (Postrel and Rumelt, 1992). These costs are borne by the principal.

Similarly, if the penalty to the agent for not meeting the utility maximisation criteria of the principal is unacceptably great, it could be advantageous for the agent to incur costs such that, regardless of the actions taken by the agent, especially in the case where the actions taken by the agent could harm the principal, the principal will be suitably compensated. Either way, when an agency relationship has been entered into, the principal and/or agent will incur a cost in ensuring that the wealth maximisation of the principal actually occurs, and this is a cost which destroys wealth for the principal (Jensen and Meckling, 1976).

In this discussion it is assumed that the CEO is almost exclusively the agent and the company owners, the principal. In this scenario, the CEO's employment contract determines, to a considerable degree, the relationship between principal and agent. Naturally, the structure of this employment contract will influence the CEO's behaviour and decision making. It is therefore in the principal's interest to ensure that the contract creates an alignment between the principal's interests and the agent's (Jensen and Meckling, 1976).

It is desirable at this stage to venture into an explanation of human behaviour which will clarify why it is in practice impossible to align principal and agent interests without putting an incentive based contract in place to shape the relationship. Michael Jensen (1994) puts forward a compelling argument that all of human behaviour is based on the responses to incentives by writing: "It is inconceivable that purposeful action on the part of human beings can be viewed as anything other than responses to incentives." (Jensen, 1994, 2). The ability of humans to continually attempt to maximise or optimise an outcome through deliberate choice is exactly that, a response to incentives. The



argument for the need for the principal to enter into an incentive based relationship with an agent is consequently irrefutably made.

### ***2.1.2. Incentives to control agency relationships***

Having established that the only meaningful way to affect the behaviour of an agent is through presenting correctly chosen incentives to him, the need arises to establish what these incentives are and whether it is possible to achieve better organisational performance in this way than would have been achieved if the principal undertook to perform the management role in place of the agent. It has been proposed by (Stroh, Brett, Baumann and Reilly, 1996), that the factors which affect the type of incentive that an organisation, read principal, should put in place are the following:

1. The level of programmability of the task to be performed by the agent;
2. The level of organisational turbulence; and
3. The expected duration of the principal/agent relationship

In the case of the CEO to owner relationship, it is clear that

1. The level of programmability is low — this would favour incentives to shape the behaviour of the CEO.
2. The level of organisational turbulence could be low or high depending on the organisation. This would not preclude the use of incentives but simply put, the more turbulence in the organisation, the greater the level of incentivisation that is needed.
3. The expected duration of the relationship between CEO and owner could be long or short. In the case where the expected duration of the relationship is short, the need for incentives is higher. It is interesting to note that in the case where the expected relationship is longer, the CEO is likely to be more

concerned about maintaining a good relationship, in order to retain his job, than chasing short term gains. The need for incentives is consequently vastly reduced (Stroh *et al*, 1996).

### ***2.1.3. Stewardship theory – the counter argument***

Agency theory takes the stance that an agent, acting for an owner, will destroy value for the owner due to the monitoring and incentive costs needed to ensure that actions in the interest of the owner are taken. The assumption which is not explicitly presented is that the owner would be as effective at running the business as the agent would be and the only difference in the wealth generation of the business is the cost of monitoring of the agent (Barth, Gulbrandsen and Schone, 2004). There is certainly a plausible counter argument that takes the view that there is no reason to believe that the owner's ability to manage a business is on a par with that of a professional manager, or agent. In fact the professional manager's ability to manage a business could very well be wealth creating, such that the agency costs discussed above are easily offset (Hertzberg, Mausner and Snyderman, 1959). The costs associated with the agency relationship are therefore not, in themselves, a reason for owners of companies to avoid such a relationship as the agent might in fact be more capable of maximising the wealth of the principal than the principal itself would be. It is therefore simply a matter of trading off the cost of incentivising and monitoring the agent against the added value that the agent is able to generate (Barth, Gulbrandsen and Schone, 2004).

Much debate has occurred over whether the ownership structure of a business affects the business's performance. The results of research are mixed and fairly complex for the following reasons.

## 2.2. Company Structure

The number of possible ownership structures makes direct comparison of the various structures difficult. To explain the complex effects of ownership structure, consider the research already undertaken within this area.

Villalonga and Amit (2004) compared family-owned, family-controlled and family-managed firms to non-family owned firms. The firm selection was from Fortune 500 firms in the period 1994 to 2004. They found that family-owned businesses in which the founder acted as the chairman or CEO created more value than non-family owned businesses. They went further to find that once the founder of the business had passed on control to a descendant, value was actually destroyed, to the extent that non-family owned businesses created more value than the descendant-controlled family-owned businesses.

A paper on founding family ownership and the agency cost of debt (Anderson, Mansi and Reeb, 2003) finds that founding family ownership creates alignment of equity stakeholders and debt stakeholders in a business and the cost of debt to the business is consistently lower in these cases. This does not shed any light on how an investor could benefit, or not, by seeking out family-owned companies but only hints at it by concluding that debt costs are lower. The sample of companies used was from the Standard and Poor's 500 (S&P 500) in the period 1993 to 1998.

Evidence from Spain indicates that the rate of return of family controlled and non-family controlled firms is not significantly different statistically, but that the family controlled firms have higher productivity efficiencies (Gorriz and Fumas, 1996). This

again does not conclusively relate ownership structure to investor returns but only suggests that the potential for greater returns exists due to higher productivity.

Harold Demsetz (1983, pg 375) suggests that in modern firms, “management exercises more freedom in the use of the firm’s resources than would exist if the firm was managed by its owner(s)” but concludes that owners’ interests and that of management of large firms, Fortune 500 list of 1975, is highly correlated and that firm performance does not suffer due to the agency effect. This research directly supports the argument that professional managers create greater wealth than owner-managers, such that agency costs are more than offset.

Anderson and Reeb (2003) find that founding family controlled firms on the S&P 500 index between 1992 and 1999, are stronger performers than non-family controlled firms. This contradicts the work by Harold Demsetz, mentioned above, and earlier work by Fama and Jensen (1983) which observes that founding family control in public firms in the United States is a less profitable ownership structure than dispersed ownership.

This work by Anderson and Reeb (2003) is also supported by Shleifer and Vishny (1997) who found that family controlled firms, or firms with large undiversified owners, seek to extract private benefits from the firm and hence forego maximum profits.

It can be seen from the variety of research done that complications arise when family controlled firms are categorised as either family controlled but not family managed or as family controlled and managed. In addition it can be considered that founder CEO and descendant CEO, family controlled and managed firms have different performances.

A recent study of family-owned businesses compared to non-family owned businesses by Villalonga and Amit (2004) concluded that family-owned businesses only create value when the founder serves as the CEO or as the chairman with a hired CEO. The paper goes on to suggest that the owner-manager conflict in non-family owned businesses is more costly than that between family and non-family shareholders in family-owned businesses where the founder is CEO or Chairman. In the case where the CEO or chairman is not the founder but a descendant, the paper suggests that the conflict between family and non-family shareholders tends to destroy value.

Without the complications of differentiating between founder run and descendant family member run firms the companies become simply owner-managed and non-owner managed. This distinction returns agency theory to the forefront of the research and focuses on the fact that the principal (owner) and the agent (manager) cannot have the same interests unless an artificially created relationship exists. This relationship has a cost associated with it (Jensen and Meckling, 1976). This argument is elegantly presented by Demsetz (1983) when he states that management and owner interests do not naturally coincide when they are not housed in the same person. He goes on to say that it is apparent that a divergence of interests exists with evidence even in the language that professional managers speak, when they claim that profit maximising is not the dominant influence on business decisions. Corporate Social Responsibility programs which businesses embark upon are frequently used as examples to support this non-profit maximising argument. This is part of the cost referred to by Jensen and Meckling (1976). Berle and Means (1932) propose that profit maximisation is the link between private ownership and efficient resource utilisation, and hence the breaking of

the owner-managed business structure reduces the incentive of corporate managers to maximise profit.

It is obvious from the varied research into ownership structure and organisation performance, and the conflicting results obtained from it, that further research is necessary in this area and that the research should be tailored to give results with a specific practical use.

## **2.3. Criteria of Performance**

Other than the structure of ownership of the firm, possible country effects, industry effects and period effects, an additional significant source of confusion is the manner in which the performance is assessed.

The parameters used to assess the performance of a firm are not consistent throughout the literature. It is possible to alter the perception of a company's performance by simply choosing alternative means of assessing the performance.

### ***2.3.1. Tobin's Q***

Tobin's Q is the most frequently used measure and hence requires some explanation. Tobin's Q is simply the ratio of the market value of a firm to the replacement value of its assets (Chung and Pruitt, 1994). The choice of market value and asset replacement value is deliberate and is aimed at avoiding the inaccuracies inherent in using accounting data in the measuring of company performance.

### ***2.3.2. Inconsistency of measures used in research***

Anderson and Reeb (2003) use a variety of measures in addition to Tobin's Q to measure firm performance, including the use of two methods of determining return on assets (ROA).

1. Using earnings before interest, tax, depreciation and amortisation (EBITDA) as the return; and
2. Using net income as the return.

Each of these methods of assessing company performance will give different results. It is apparent that the selection of the measure of company performance will greatly affect the conclusions which can be drawn from the research. Gorriz and Fumas (1996) use yet another measure. They chose the rate of return on equity to determine the efficiency and profitability of a firm. Furthermore, Demsetz and Lehn (1985) utilise accounting profit rate as the measure for firm performance while a later study by the selfsame Demsetz and Villalonga (2001) prefer to use Tobin's Q. All of the measures mentioned so far will produce different results for firm performance and the list is far from exhaustive, it is therefore essential to select a suitable measure of firm performance which will suit the purpose of the research being done.

### ***2.3.3. Accuracy of performance measures***

To delve further into the complexities associated with the selection of performance criteria for companies, consideration must be given to the reliability of the data that is employed in determining the performance. There is a strong argument against using accounting data for measurement of firm performance because it is historical and backward looking rather than forward looking. Tobin's Q attempts to overcome this to

some degree by using the current market value (share price) and the asset replacement costs, instead of accounting data. Accounting data also has distortions in it brought about by the restrictions that are imposed upon accountants through the accounting standards in force at the time. Book asset values are notoriously inaccurate as they are often presented in the firm's accounts at depreciated values (or other equally unrealistic values) rather than true replacement values. The consequence is that measures of firm performance such as ROA contain possibly significant distortions. Tobin's Q is calculated using the replacement value of a company's assets which should make it a better measure of firm performance. Unfortunately the book value of the firm's assets is generally used as a proxy for the replacement value of the assets. This brings the distortions inherent in accounting data into the calculation of Tobin's Q, exactly what using Tobin's Q was trying to avoid in the first place (Demsetz and Villalonga, 2001).

#### ***2.3.4. Company performance from the investor's perspective***

Shung, *et al* (2002) used a combination of dividend yield and share price change in a single measure of company performance. There is considerable merit in the use of this method for the simple reason that investors are interested in exactly this return. The other measures of firm performance are of only secondary interest to investors. Calculation of firm performance as used by Shung, *et al* (2002) is as follows

$$\text{Return in year } t = \ln ((P_t + D_t)/(P_{t-1}));$$

where:

$P_t$  = share price at end of year  $t$ ;

$P_{t-1}$  = share price at end of year  $t-1$ ; and



$D_t$  = dividends paid during year t.

This measure gives the actual investment of the return which is generated by the company being analysed. It reflects the actual dividend payments together with the actual share price changes in a given period. The share price of a company is highly dependent on perceptions in the investment community and consequently is unlikely to reflect the true value of the company for more than a fraction of the time. This is generally true of all listed shares but is unimportant in studies concerned with the medium to long term. Comparing groups of companies over periods of years will reflect differences in average growth rates for the groups. Undervalued and overvalued shares in large groups over an extended period will average out and the longer term underlying trend will form the basis of analysis.

## **2.4. Room for debate**

As can be seen, the literature does not present a coherent picture of the role of owner-managed and non-owner managed structures in the performance of businesses. The evidence appears to be highly dependent on the performance criteria chosen to assess the business as well as the manner in which the sample of businesses were chosen. It would seem prudent then, when contemplating research in this area, to select the performance criteria with a specific purpose in mind and to limit the sample of companies analysed to a specific category rather than attempting to generalise too widely.

Although there is evidence that owner-managed firms are likely to show different returns, in some instances, than other businesses there is a need to confirm these findings in the local context. Emerging markets can behave differently to established markets and local investors are likely to be more interested in the JSE listed companies compared to, say, those studied in the US.

The research would be most valuable to investors if the criteria of performance meet their requirements. Consequently a slightly modified form of the criterion used by Shung, *et al*, (2002) has been chosen to assess the performance of the JSE listed companies in this research.

## Chapter 3 - Research Questions and Hypotheses

The aim of this research is to give more information to investors interested in the shares listed on the JSE so that better investment decisions can be made. The only real questions which an investor needs to answer are the following:

1. What shares to buy/hold?
2. When to buy the shares?
3. When to sell them?

The better an investor is able to answer these questions, the better the investment decisions that he will make. There are numerous methods in use today which claim to answer these questions. The most widely known and applied of these is the capital asset pricing model (CAPM) which although widely used, has many shortcomings. An alternative which addresses most of the failings of CAPM is arbitrage pricing theory (APT) and it is within the application of APT that this paper has importance. It is necessary to have a basic understanding of APT to appreciate the importance of this research into the ownership structure of listed companies.

### 3.1. Arbitrage Pricing Theory

Both CAPM and APT calculate the expected returns of a share or portfolio of shares as the sum of the market average return and a risk related premium (or discount). The difference between APT and CAPM is that APT calculates the expected returns not only by the market average return and the perceived risk of the share but allows for as many factors as you wish to include as possible determinants (Bodie, Kane, and Marcus, 2005). For example, should a particular share react to the change in the oil price in a

particular way, the oil price can be included as a factor with an appropriate coefficient relating the change in return to the oil price. The general form of the theory is encapsulated in the following equation:

$$r_i = E(r_i) + \beta_{i1}F_1 + \beta_{i2}F_2 + \dots + \beta_{in}F_n + e_i;$$

where  $r_i$  = return for stock  $i$ ;  
 $E(r_i)$  = expected return for stock  $i$ , all things remaining unchanged;  
 $\beta_{in}$  = co-efficient (sensitivity) of stock  $i$  to factor  $n$ ;  
 $F_n$  = factor  $n$ ; and  
 $e_i$  = non-systemic risk factor.

The difficulty with the APT model is that there is no indication as to what the factors are that affect the returns from a particular share. It is up to the person who is applying the model to choose suitable factors for the shares in their portfolio (Bodie, *et al*, 2005). Dealing firstly with the non-systemic risk term in the equation, the effect of this term is stock specific and can be ignored when selecting a stock for a sufficiently diversified portfolio. The model then becomes particularly useful in selecting individual shares, as long as suitable factors can be chosen and accurate coefficients can be determined.

One of the factors to consider when building the model is the ownership structure of the company. This research will attempt to determine whether ownership structure is a useful factor to include in the model. There are many possible ownership structures for companies and this research will compare two of them. These being, owner-managed companies and non-owner managed companies.

## **3.2. Research Question**

This research has attempted to answer the question:

### ***3.2.1. Question 1***

**Is there a difference between the investor returns in owner-managed companies compared to non-owner managed companies?**

Two sub-questions are also of interest and relate to the main question. These are:

### ***3.2.2. Question 2***

**Is there a difference between the investor returns through dividend distributions in owner-managed companies compared to non-owner managed companies?**

And;

### ***3.2.3. Question 3***

**Is there a difference between the investor returns through share price changes in owner-managed companies compared to non-owner managed companies?**

By answering these questions, an investor will be in a better position to decide whether to include ownership structure as a factor in his APT model. By quantifying the differences between the returns of the two groups, it should also be possible to determine the coefficients to be applied to the factor.

### 3.1. Hypotheses

The analysis of the owner-managed and non-owner managed returns by descriptive means gives a good overall picture of the differences and similarities between the two groups but to draw definitive conclusions, a more rigorous analysis is needed. This can be achieved through statistical analysis and inference. The hypotheses tested in this way are the following:

#### *3.1.1. Share price changes - hypothesis 1*

In assessing whether there are significant differences in the returns obtained between the two groups through share price changes at the 95% confidence level the null hypothesis is:

**H0: The difference in mean share price change of owner-managed companies compared to non-owner managed companies during the period of analysis is not significant.**

And the alternative hypothesis is:

**H1: The difference in mean share price change of owner-managed companies compared to non-owner managed companies during the period of analysis is significant.**

### ***3.1.2. Dividend distributions – hypothesis 2***

To assess whether there are significant differences in the returns obtained between the two groups through dividend distributions at the 95% confidence level the null hypothesis is:

**H0: The difference in mean dividend distributions of owner-managed companies compared to non-owner managed companies during the period of analysis is not significant.**

And the alternative hypothesis is:

**H1: The difference in mean dividend distributions of owner-managed companies compared to non-owner managed companies during the period of analysis is significant.**

### ***3.1.3. Combined returns – hypothesis 3***

To assess whether there are significant differences in the combined returns obtained between the two groups at the 95% confidence level the null hypothesis is:

**H0: The difference in mean investor returns of owner-managed companies compared to non-owner managed companies during the period of analysis is not significant.**

And the alternative hypothesis is:

**H1: The difference in mean investor returns of owner-managed companies compared to non-owner managed companies during the period of analysis is significant.**

### **3.2. Conclusion**

This is a worthwhile research question because by identifying whether there is a difference in performance between owner-managed and non-owner managed companies, investors will be able to make better investment decisions. The sub-questions are also worthwhile because by answering them the nature of the returns generated by the two groups of companies can be determined. The validity of the results obtained can be further tested by using statistical inference in the form of hypothesis testing to add rigour to the analysis. This will allow some definitive conclusions to be drawn rather than leaving them in a more subjective form.



## **Chapter 4 - Research Method**

### **4.1. Research Design**

The research is designed to measure and describe the differences between the returns of owner-managed and non-owner-managed businesses in specific sectors of the JSE with the intent of providing a focussed, definitive result which is useful to investors.

Investors are interested in the total return which can be obtained from the particular investment. In the case of investments in equities, as this research considers, the return consists of the capital gain through share price changes and the company earnings distributions through dividends. The returns have been considered in this light and include price changes and dividend distributions.

For practical reasons this paper considers only the companies listed in the industrial and financial sectors of the JSE main board. It is expected that the most meaningful results can be obtained in these areas as the number of owner-managed companies in these sectors is expected to be greater than in the other sectors, leading to a more balanced distribution of owner-managed to non-owner managed firms.

The period over which the analysis will take place has been chosen as the most recent five-year period for which data has been obtained. This is the period January 2002 to June 2007. It is expected that this period is long enough for the results to be meaningful and short enough, and recent enough, for the results to be considered as a fair reflection of the current environment.

Possibly the most difficult aspect of this paper is to determine which companies are owner-managed and which are not. Shareholdings in listed companies can be convoluted with the ultimate owner, and hence controlling shareholder, not obviously apparent. Trusts holding shares on behalf of individuals can disguise the identity of the controlling entity, whether it is an individual or not. This is true for companies whose shares are held in shells or other holding companies as well. It is, however, necessary to clearly define, in a manner which can be practically applied, what constitutes an owner-managed company.

For this research, an owner-managed business shall be considered to be one in which the CEO or an executive director of the company is also the controlling shareholder. Non-owner managed businesses will, by definition, not meet this criterion. All listed companies will either match this criterion or not, either falling into the category of owner-managed or non-owner managed. This research, therefore, considers the entire population of companies listed in the financial and industrial sectors of the JSE.

## **4.2. Unit of Analysis**

The unit of analysis is a single JSE listed company.

## **4.3. Population and Sample**

The research is limited to JSE listed companies that fall in the industrial and financial sectors of the main board, the development capital board and the venture capital board.

The period of analysis refers to the period January 2002 to June 2007.

For a company to be included in the analysis the following further criteria are applied.

1. All companies listed for more than two continuous quarters during the period of analysis will be considered. This includes companies which either listed part way through the period being considered, delisted during this period, or both. It is important to do this to avoid survivorship bias.
2. Companies with share trading having being suspended for periods will be excluded for the period of suspension only if the share is subsequently delisted, otherwise it is retained at its suspended price.
3. Companies with more than one share class listed will be considered to have one share price which is the price of the ordinary shares only, all other share classes are discarded. The ordinary shares are considered to give the market determined fair value of the company while other classes of share will trade at a premium or discount to the ordinary shares. Including these classes would introduce a distortion to the share price.

The purpose of these criteria is to exclude all companies whose share price data will distort the results but to include as many companies with suitable share price data as possible.

#### **4.4. Data requirements and collection process**

The data needed for this research consists of the following elements

1. Quarterly share price data for each share listed on the JSE main board financial and industrial sectors, development capital board and venture capital board. This

information has been obtained from the JSE marketing information department (see Appendix 6). Quarterly data were considered to be appropriate as they give enough detail for meaningful annual results to be obtained, as well as enough detail for the selection process for companies listed for only part of the period of analysis to be accurate, while not being cumbersome through having too much data.

2. Dividend distributions for each company forming the sample. This information was downloaded by company from the I-Net Bridge database through their website (see Appendix 7).
3. Controlling shareholder of each of the companies forming the sample. This information was downloaded from the I-Net Bridge database through their website.
4. Executive directors of each of the companies forming the sample. This information was downloaded company by company from the I-Net Bridge database through their website.

#### **4.5. Data Analysis Approach**

The analysis process began with the collation and manipulation of the data obtained from the JSE market information department and from I-Net Bridge into spreadsheets. The data was arranged in a manner suitable for shareholders to be compared to executive directors for categorisation purposes and for the calculation of returns of the companies. The process of categorising the sample into owner-managed and non-owner managed companies was through a manual process of comparing the controlling shareholder of each company to the list of executive directors of the same company.

Commonality between the controlling shareholder and one of the executive directors identified the company as owner-managed, otherwise it is considered to be non-owner managed (see Appendix 2).

After the categorisation of the companies into owner-managed and non-owner managed was complete, the individual company returns were calculated on a quarterly basis, firstly for share price changes and then, separately, for dividend returns, using the following formulae:

for calculating returns due to price changes:

$$\text{Return}_{\text{quarter } x} = ((P_{\text{quarter } x} - P_{\text{quarter } x-1}) / P_{\text{quarter } x-1}) * 100;$$

and for calculating returns due to dividend distributions:

$$\text{Return}_{\text{quarter } x} = D_{\text{quarter } x} / P_{\text{quarter } x-1} * 100;$$

where  $P_{\text{quarter } x}$  = Share Price in Quarter x; and

$D_{\text{quarter } x}$  = Total Dividends Declared in Quarter x.

As can be seen, the returns are calculated as a percentage of the starting price of any one quarter. Since investors are also concerned with the total return, the combined returned through share price changes, as well as through dividend distributions, has also been calculated. The total return has also been calculated on a quarterly basis using the following formula:

$$\text{Return}_{\text{quarter } x} = ((P_{\text{quarter } x} - P_{\text{quarter } x-1}) + D_{\text{quarter } x}) / P_{\text{quarter } x-1} * 100.$$

Again this is being presented as a percentage of the starting price of the quarter.

The purpose of combining the capital gains and the dividend distributions is to simulate the performance which investors are interested in. That is the total return from a finite, fixed value, original investment. The aim of this research is to identify the differences in investment performance between owner-managed and a non-owner managed companies. The fluctuations in returns make direct comparison between the quarterly data difficult, it is therefore also necessary to calculate the cumulative returns over different periods for these two groups of companies. This return has been calculated by taking the average quarterly growth of all the companies in each group as the growth for the group as a whole for that quarter. This is the equivalent of the growth which would have been achieved by a portfolio of shares consisting of all of the shares in that group held in equal weight.

Cumulative returns have then been calculated for each complete year within the period of analysis as well as over the entire period of analysis. The cumulative returns have been calculated for these periods separately for share price changes and for dividend distributions and then finally for the combined return.

## 4.6. Descriptive Statistics

The average quarterly returns for each group were then analysed to produce the following descriptive statistics:

1. The category mean for the period of analysis.
2. The category median for the period of analysis.
3. The category standard deviation and variance for the period of analysis.
4. The range that the values cover during the period of analysis
5. The minimum value for the average return in a quarter for each group during the period of analysis
6. The maximum value for the average return in a quarter for each group during the period of analysis

These quantities will describe the magnitude of the returns for each group, as well as to describe the variation which can be expected in the returns for each group. This method has been chosen over other methods due to the variation in the numbers of companies forming the sample for each group in a particular quarter. It must be remembered that the number of companies present in each category will differ from quarter to quarter due to share suspensions, new listings and de-listings. More complete results are obtained by considering all companies listed, even if only for a part of the total period, rather than only the companies which are listed for the entire period.

The descriptive statistics for each category were then compared to each other to find differences and similarities. To make the analysis more rigorous, further analysis has been performed in the form of statistical inference.

## **4.7. Statistical inference**

Statistical inference, in this case, takes the form of hypothesis testing between the average returns of each group of companies.

### ***4.7.1. Population and sample***

The average returns were calculated on a quarterly basis for both of the groups. These quarterly returns form the samples that were analysed. The period of analysis contained 21 quarters and therefore each sample consists of 21 data points. The population consists of the average returns for companies listed in the two groups in all quarters, not just those falling within the period of analysis. By doing this analysis, inferences can be made about the population from the sample data.

The procedure used in performing the analysis is as follows:

1. The data to be analysed was formatted correctly for the statistical analysis package being used. In this case, three sets of data needed to be prepared, one for share price returns, one for dividend distribution returns and the last for the cumulative returns.
2. The appropriate hypothesis testing method was then selected for each of the groups of data. Since quarterly data was used and the period of analysis only contains 21 quarters, it was necessary to check the normality assumptions and the equal variance assumptions before selecting the final test.



3. Once the correct test had been selected, the tests were performed at the 95% confidence level. The 95% confidence level was chosen because it is a universally accepted norm for hypothesis testing.
4. After completion of the tests, the resulting probability level, in each case, was compared to the significance level (5%) and the null hypothesis was either rejected, or was failed to be rejected.
5. From the outcome of the tests, conclusions were drawn. The results and conclusions are presented in chapter 5 and discussed in chapter 6.

#### **4.8. Research Limitations**

The research will be conducted on JSE listed companies only and hence is any results are only applicable to this category of company. Furthermore the following limitations will also be present:

- The companies analysed will be limited to the financial and industrial sectors and hence industry effects will be present in the results.
- The analysis assumes returns over a calendar year are a fair reflection of all company's returns and hence does not take financial year end effects or seasonality into account.
- Although the analysis considers what is expected to be a suitable period for analysis, it is possible that economic conditions and business cycles could have a distorting effect on the results because of the period chosen. Consequently periodic effects could be present in the results.

## Chapter 5 - Results

The financial and industrial sectors of the JSE have contained, over the period January 2002 to June 2007, 251 different shares (see Appendix 1). All of these shares were considered for inclusion in the two groups, however, a number of them were not suitable. The process of dividing the shares into two groups and how the unsuitable shares were identified follows.

### 5.1. Grouping of the companies

#### *5.1.1. Identifying the controlling shareholder*

As referred to in the method section, the greatest difficulty in performing this research was in identifying which companies were owner-managed and which were not. It is a time consuming, manual process that requires the identification of the controlling shareholder of every listed company in the chosen sectors. I-Net Bridge list the controlling shareholder for all currently listed shares, however, the data is not complete as many of the shares are listed as having no controlling shareholder or that the controlling shareholder is not known. The I-Net Bridge database was used as a first-pass tool for grouping the companies. It was therefore necessary to confirm the information taken from I-Net Bridge by crosschecking every company's controlling shareholder with that listed in the "Who Owns Whom" (2003, 2004 and 2007).

To identify the controlling shareholder of the shares which are no longer listed, this being more than 50% of all shares being considered, the last known list of shareholders

was downloaded from the I-Net Bridge database separately for each share. From these lists the major shareholders could be identified. Where the share listings were not conclusive in identifying the controlling shareholder, the controlling shareholder was cross checked against that listed in “Who Owns Whom” appropriate to the year when the company was last listed. In this way the controlling shareholder of every company listed in the industrial and financial sectors of the JSE between January 2002 and June 2007 was identified.

### ***5.1.2. Company Management***

An owner-managed business has been defined in chapter 3 as a business in which the controlling shareholder is also an executive director of the business. It was necessary, therefore, to compare the controlling shareholder with the management structure of the business to determine whether the controlling shareholder is an executive director of the company or not.

The I-Net Bridge database contains the management structure of all businesses listed on the JSE, currently listed or previously list. The management structure for each company that was listed during the period January 2002 to June 2007 was separately downloaded from the I-Net Bridge database.

### ***5.1.3. Identifying ownership structure***

Once the controlling shareholder and list of executive directors of each company was known, it was possible to identify whether a company was owner-managed or not. The process of identifying owner-managed companies was a manual process of comparing

the list of executive directors of each company with the controlling shareholder for the same company. If the controlling shareholder was also an executive director of the company, the business was classified as being owner-managed, otherwise it was classified as being non-owner managed. After completing this process the following results were obtained.

The companies were split into two groups, with 142 companies falling in the non-owner managed group and 110 falling in the owner-managed group.

## **5.2. Share price data**

In addition to having the information to group the shares into owner-managed or non-owner-managed, it was necessary to have the share prices for every share during the period January 2002 to June 2007. The share prices were obtained on a quarterly basis from the JSE marketing department (see Appendix 6). The share price as indicated in a particular quarter, is the share price at the end of that quarter. The data as it was obtained from the JSE marketing department was in a single long list and had to be manipulated and cleaned before they could be presented in their current form as seen in Appendix 6.

### ***5.2.1. Cleaning of data***

Shares listed in the financial and industrial sectors on the JSE consist of more than just ordinary shares of individual companies. There are a number of additional classes of shares, including preference shares and other linked units which are also listed. The share classes other than the ordinary shares do not necessarily reflect the market value

of the company. The rules which apply to these shares generally create some distortion in the share price compared to the ordinary share. In this study it was decided that the ordinary shares would be used as a fair reflection of the market value of a company and consequently all other share classes have been discarded.

There was a need to further clean the data by reducing the number of shares to be considered.

From the two groups, the following companies were omitted due to share price remaining constant as a result of suspensions and subsequent delisting of the company. These would not offer any value to the analysis.

TOC: Toco Holdings Limited

TRF: Terrafin Holdings Limited

PDM: Paradigm Capital Holdings

PML: Premier Group Limited

FEQ: Fe Squared Holdings Limited

CTH: Community Technologies

ABC: Abacus Technology Holdings

FBF: Fbc Fidelity Bank Holdings

HXT: Hix Technologies Limited

NEI: Northern Eng Ind Afr Limited

KHO: Kirchmann-Hurry Prop Limited

RHW: Richway Retail Prop Limited

In addition, the following exclusions were made due to share suspensions for part of the period of analysis only but also resulting in de-listings:

SMR: Samrand Develop Holdings Limited	- 1 <sup>st</sup> quarter 2004 onwards
CAL: Chariot Land Limited	- 3 <sup>rd</sup> quarter 2002 onwards
CMG: Cenmag Holdings Limited	- 4 <sup>th</sup> quarter 2002 onwards
BNT: Bonatla Property Holdings	- 1 <sup>st</sup> quarter 2004 onwards
AQL: Aquila Growth Limited	- 1 <sup>st</sup> quarter 2005 onwards
PMG: Primegro Properties Limited	- 3 <sup>rd</sup> quarter 2003 onwards
CEN: Centrecity Property Fund	- 1 <sup>st</sup> quarter 2004 onwards
ALD: Aludie Limited	- 4 <sup>th</sup> quarter 2004 onwards

### **5.3. Final data set**

The final group lists contained the following number of companies

Non-owner managed	:	138
Owner-managed	:	107

Companies listed throughout the period were as follows

Non-owner managed	:	62
Owner-managed	:	59

Companies de-listed during the period were as follows

Non-owner managed	:	57
-------------------	---	----

Owner-managed : 32

Companies newly listed during the period were as follows

Non-owner managed : 19

Owner-managed : 15

## 5.4. Descriptive Analysis

### 5.4.1. Growth rates for share prices during the period

After averaging the quarterly growth rates due to share price changes for the companies in each group, a sample of 21 quarters of average growth rate for the groups was obtained (see Appendix 3). From these samples the following descriptive statistical quantities were calculated.

**Table 1 - Descriptive statistics for quarterly growth due to share price changes**

	Non-owner managed	Owner-managed
Mean	8.29%	11.26%
Maximum	28.85%	23.06%
Minimum	-10.07%	-7.38%
Range	38.91%	30.44%
Standard deviation	9.54%	7.88%
Variance	0.00911	0.006213
Median	8.32%	13.38%

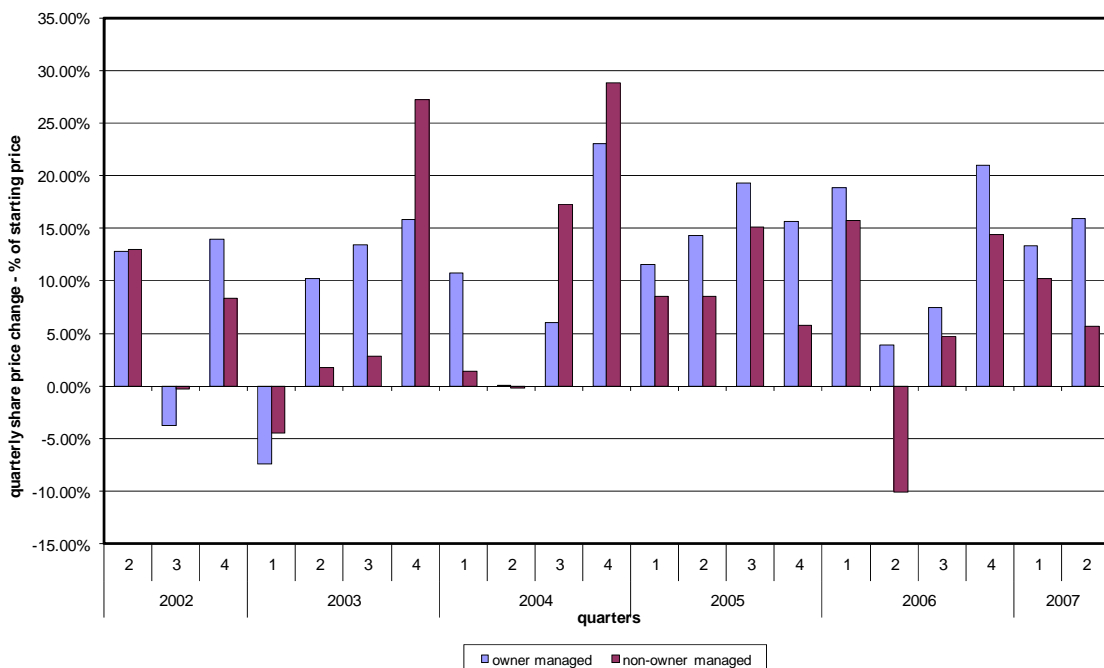
Annual growth rates for the two groups were calculated as the increase in cumulative return divided by the starting price of the period and not as the sum of the quarterly returns. The annual growth rates due to share price changes are presented in table 2 below.

**Table 2 - Annual growth rate due to share price changes**

	2002	2003	2004	2005	2006
Non-owner managed	22.00%	27.07%	52.81%	43.44%	24.68%
Owner-managed	23.78%	34.11%	44.67%	75.99%	60.56%

The variation in quarterly growth is best seen in graphical form as shown in figure 1 below.

**Figure 1 - Quarterly returns due to share price changes**





#### 5.4.2. *Returns due to dividend distributions during the period*

In the identical way to that used in section 5.4.1 above, the following descriptive statistical data was calculated for the two groups due to dividend distributions. The full results can be seen in Appendix 4.

**Table 3 - Descriptive statistics for quarterly growth due to dividend distributions**

	Non-owner managed	Owner-managed
Mean	2.08%	1.22%
Maximum	5.35%	4.63%
Minimum	0.76%	0.49%
Range	4.69%	4.14%
Standard deviation	1.07%	1.03%
Variance	0.001	0.000106
Median	1.92%	0.83%

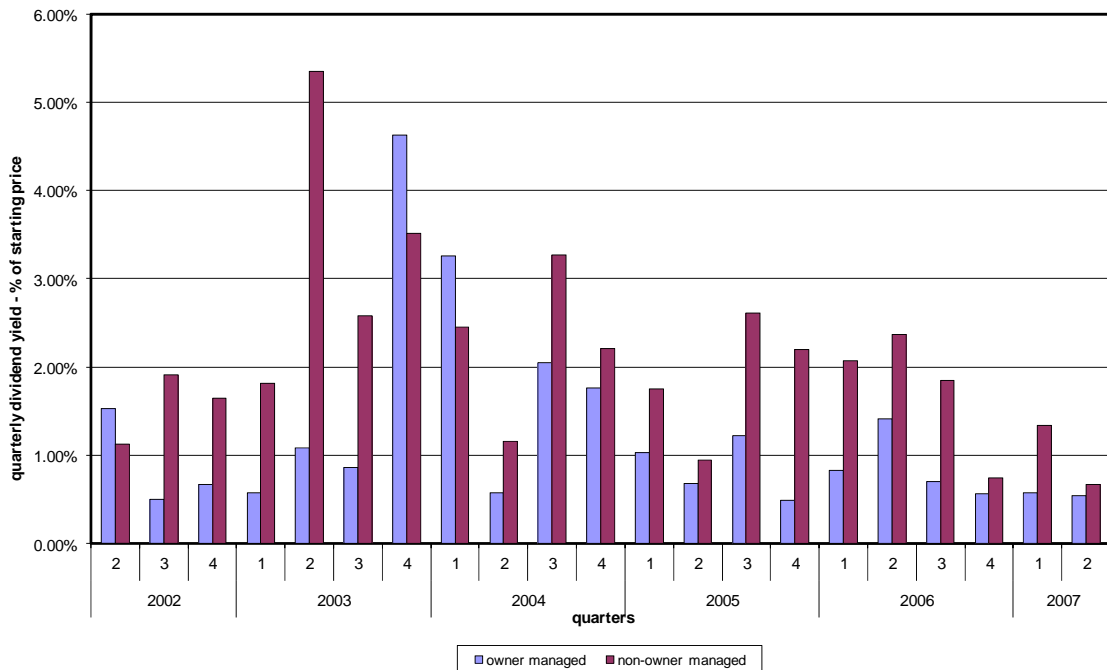
The annual returns have been calculated can be seen in table 4 below.

**Table 4 - Annual growth due to dividend distributions**

	2002	2003	2004	2005	2006
Non-owner managed	4.76%	13.91%	9.40%	7.72%	7.21%
Owner-managed	2.72%	7.30%	7.84%	3.48%	3.55%

As before the quarterly returns are best represented graphically as shown in figure 2 below.

**Figure 2 - Quarterly returns due to dividend distributions**



### 5.4.3. Combined returns during the period

From an investor's perspective the most important quantities are the combined returns (see Appendix 5). These returns have been analysed on a quarterly basis as well and produce the following descriptive statistics:

**Table 5 - Descriptive statistics for quarterly combined returns**

	Non-owner managed	Owner-managed
Mean	10.37%	12.44%
Maximum	31.06%	24.82%
Minimum	-7.7%	-6.81%
Range	38.76%	31.62%
Standard deviation	9.68%	8.11%
Variance	0.009369	0.006577
Median	9.45%	14.34%

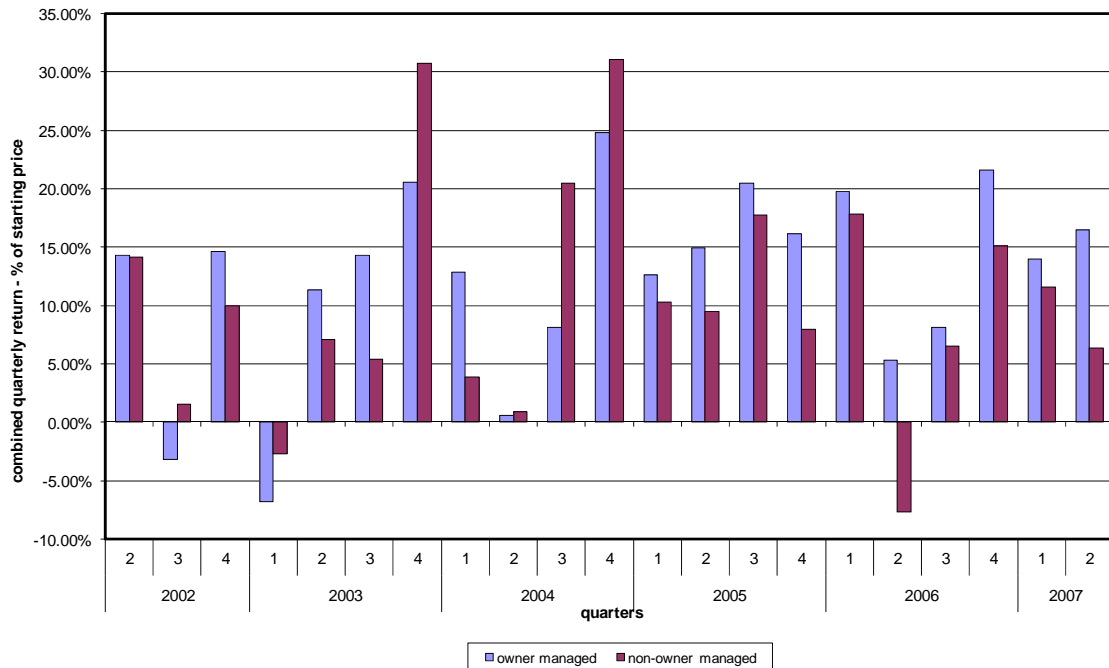
Returns are more frequently presented as an annual figure. The returns have therefore also been calculated as such and appear in table 6 below:

**Table 6 - Annual growth of combined returns**

	2002	2003	2004	2005	2006
Non-owner managed	27.49%	43.59%	65.53%	53.49%	33.42%
Owner-managed	26.92%	42.98%	53.29%	81.31%	65.90%

It is again best to present the quarterly combined returns graphically to get an overall picture of the results, see figure 3 below.

**Figure 3 - Combined quarterly returns**



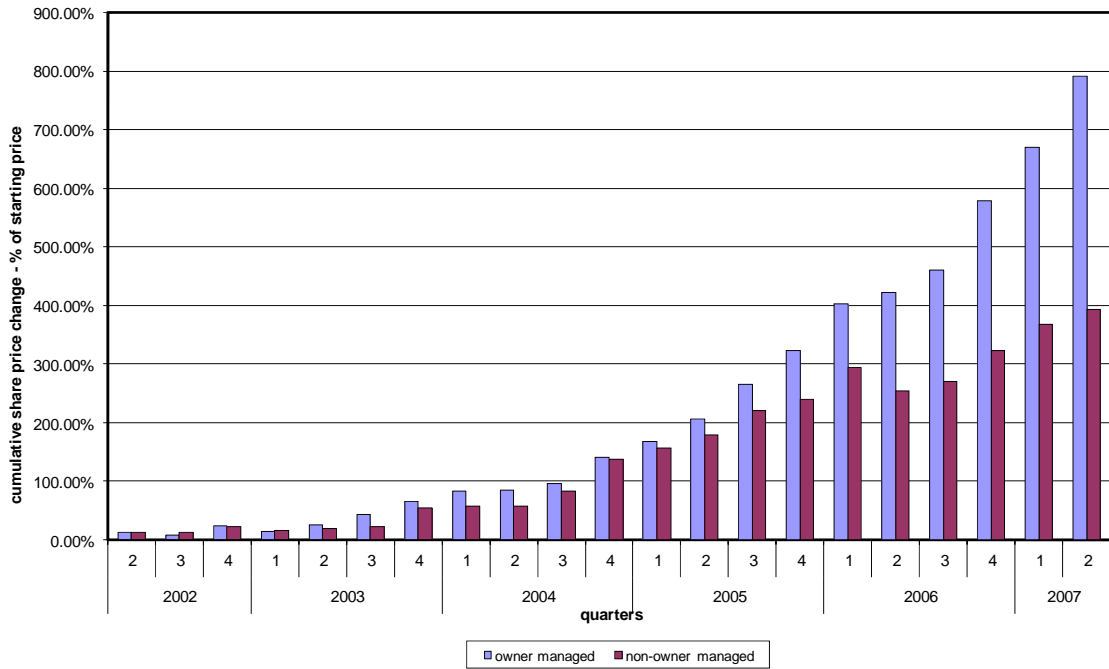
## 5.5. Cumulative Returns

An investor is interested in the annual returns from different investments but also in the cumulative returns. The cumulative returns give the long term picture of how an investment performs. It also removes some of the noise which exists in other representations of the returns.

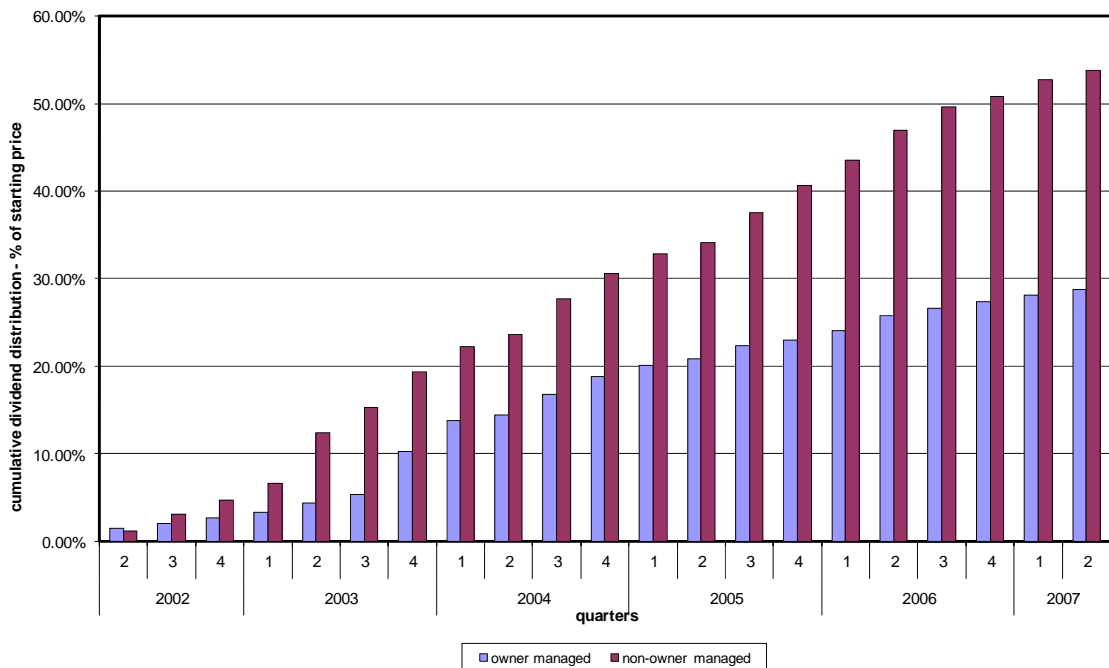
Representing cumulative returns graphically illustrates two phenomena most effectively. The first is the exponential nature of growth. This is very evident in figure 4 and figure 6. The second is the power of compounding. This is directly related to the exponential growth phenomenon as it is the cause of it. The power of compounding is

evident in figures 4, 5 and 6. Small differences in quarterly returns compounded over longer periods produce vastly different absolute returns.

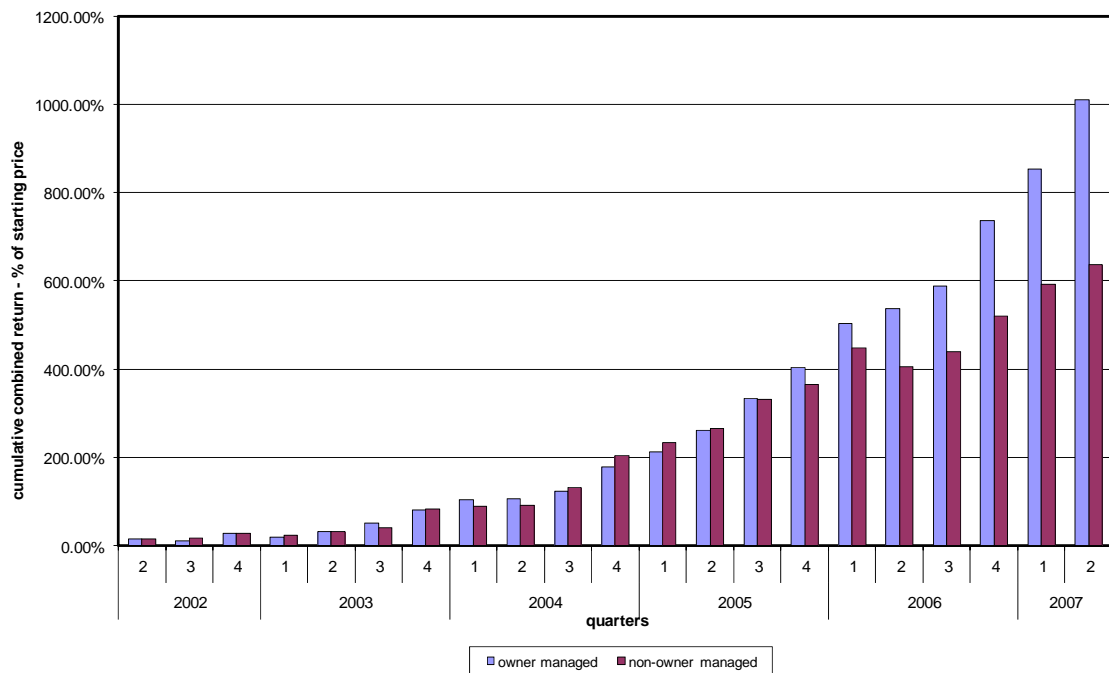
**Figure 4 - Cumulative returns due to share price changes**



**Figure 5 - Cumulative returns due to dividend distributions**



**Figure 6 - Cumulative combined returns**



## 5.6. Statistical Inference

Three hypothesis tests were performed, to compare the results between the two groups for share price changes, dividend distributions and for the combined returns. In the period of analysis the individual quarterly returns of shares were averaged to give a quarterly return for the group. Since there are 21 quarters in the period of analysis, the sample size is 21. The population about which we would like to infer results is all the future quarters for which owner-managed and non-owner managed companies are listed in the financial and industrial sectors of the JSE.

Hypothesis testing requires that a null hypothesis is established which, in general, refers to the condition where there is no difference between one list of data compared to another. The alternative condition is established as the alternative hypothesis. In general

the alternative hypothesis refers to the condition where there is a difference between the two lists of data. In accepting either the null hypothesis or the alternative hypothesis as being true, it is possible to make two types of error. The first is the type I error, in which the null hypothesis is rejected incorrectly. The other is a type II error in which the null hypothesis is not rejected when in fact it should have been. In performing an hypothesis test, the probability that an error is being made by rejecting the null hypothesis (a type I error) is being established.

### ***5.6.1. Share price changes***

For the detail behind the results, see appendix 8. The summarised results are listed in sections 5.6.1.1 to 5.6.1.8.

#### **5.6.1.1. Hypotheses**

When testing the sample for significance with respect to differences due to share price changes, the null hypothesis is:

**H<sub>0</sub>: The difference in mean share price change of owner-managed companies compared to non-owner managed companies during the period of analysis is not significant.**

And the alternative hypothesis is:

**H1: The difference in mean share price change of owner-managed companies compared to non-owner managed companies during the period of analysis is significant.**

#### **5.6.1.2. Sample size**

The sample size is 21 and since this is less than 30, it was necessary to test the normality assumptions before deciding on the test which would be used.

#### **5.6.1.3. Normality assumptions**

In deciding on the correct test to use when performing hypothesis testing it is necessary to check for normality in the distribution of the data forming the sample. The tests performed in this research to test for normality were:

skewness normality;

kurtosis normality; and

omnibus normality.

In this case the tests revealed that none of the normality assumptions could be rejected.

#### **5.6.1.4. Equal variance assumptions**

In a similar way to the testing for normality of the data for hypothesis testing it is necessary to test for equal variance so that the correct test can be chosen. The equal variance tests performed on the data in this paper were:



variance ratio equal variance test; and  
modified Levine equal variance test

In this case none of the equal variance assumptions could be rejected.

#### **5.6.1.5. Choice of test method**

With none of the normality assumptions being rejected and none of the equal variance assumptions being rejected, the two sample, two-tailed t-test was chosen.

#### **5.6.1.6. Probability level**

The result obtained from performing an hypothesis test is the probability of making a type I error by rejecting the null hypothesis.

The test was run in NCSS software and the result produced was:

probability level = 0.278914.

This means that there is a 27.89% chance of making a type I error by rejecting the null hypothesis. This is considerably greater than the chosen significance level of 5%.

#### **5.6.1.7. Test result**

At a significance level of 5%, the test result is that the null hypothesis cannot be rejected.

### **5.6.1.8. Conclusion**

It has to be concluded from the test result that there is no significant difference between the average growth rates through share price changes of non-owner managed companies and owner-managed companies at the 95% confidence level.

### ***5.6.2. Dividend distributions***

For the detail behind the results, see appendix 9. The summarised results are listed in sections 5.6.2.1. to 5.6.2.8.

#### **5.6.2.1. Hypotheses**

When testing the sample for significance with respect to differences due to dividend distributions, the null hypothesis is:

**H0: The difference in mean dividend distributions of owner-managed companies compared to non-owner managed companies during the period of analysis is not significant.**

And the alternative hypothesis is

**H1: The difference in mean dividend distributions of owner-managed companies compared to non-owner managed companies during the period of analysis is significant.**

### **5.6.2.2. Sample size**

The sample size is 21 and since this is less than 30, it was necessary to test the normality assumptions before deciding on the test which would be used.

### **5.6.2.3. Normality assumptions**

In deciding on the correct test to use when performing hypothesis testing it is necessary to check for normality in the distribution of the data forming the sample. The tests performed in this research to test for normality were:

skewness normality;

kurtosis normality; and

omnibus normality.

In this case the tests revealed that all of the normality assumptions were be rejected.

### **5.6.2.4. Equal variance assumptions**

In a similar way to the testing for normality of the data for hypothesis testing it is necessary to test for equal variance so that the correct test can be chosen. The equal variance tests performed on the data in this paper were:

variance ratio equal variance test; and

modified Levine equal variance test

In this case none of the equal variance assumptions could be rejected.

#### **5.6.2.5. Choice of test method**

With all of the normality assumptions being rejected and none of the equal variance assumptions being rejected, the Mann-Whitney U, two-tailed test was chosen.

#### **5.6.2.6. Probability level**

The result obtained from performing an hypothesis test is the probability of making a type I error by rejecting the null hypothesis.

The test was run in NCSS software and the result produced was:

probability level = 0.000784.

This means that there is a 0.078% chance of making a type I error by rejecting the null hypothesis. This is considerably smaller than the chosen significance level of 5%.

#### **5.6.2.7. Test result**

At a significance level of 5%, the test result is that the null hypothesis is rejected.

#### **5.6.2.8. Conclusion**

It has to be concluded from the test result that there is significant difference between the average dividend distributions of non-owner managed companies and owner-managed companies at the 95% confidence level.

### ***5.6.3. Combined returns***

For the detail behind the results, see appendix 10. The summarised results are listed in sections 5.6.3.1. to 5.6.3.8.

#### **5.6.3.1. Hypotheses**

When testing the sample for significance with respect to differences due to combined returns, the null hypothesis is:

**H0: The difference in mean investor returns of owner-managed companies compared to non-owner managed companies during the period of analysis is not significant.**

And the alternative hypothesis is:

**H1: The difference in mean investor returns of owner-managed companies compared to non-owner managed companies during the period of analysis is significant.**

#### **5.6.3.2. Sample size**

The sample size is 21 and since this is less than 30, it was necessary to test the normality assumptions before deciding on the test which would be used.

### **5.6.3.3. Normality assumptions**

In deciding on the correct test to use when performing hypothesis testing it is necessary to check for normality in the distribution of the data forming the sample. The tests performed in this research to test for normality were:

skewness normality;  
kurtosis normality; and  
omnibus normality.

In this case the tests revealed that none of the normality assumptions could be rejected.

### **5.6.3.4. Equal variance assumptions**

In a similar way to the testing for normality of the data for hypothesis testing it is necessary to test for equal variance so that the correct test can be chosen. The equal variance tests performed on the data in this paper were:

variance ratio equal variance test; and  
modified Levine equal variance test

In this case none of the equal variance assumptions could be rejected.

### **5.6.3.5. Choice of test method**

With none of the normality assumptions being rejected and none of the equal variance assumptions being rejected, the two sample, two-tailed t-test was chosen.

#### **5.6.3.6. Probability level**

The result obtained from performing an hypothesis test is the probability of making a type I error by rejecting the null hypothesis.

The test was run in NCSS software and the result produced was:

probability level = 0.457386.

This means that there is a 45.74% chance of making a type I error by rejecting the null hypothesis. This is considerably greater than the chosen significance level of 5%.

#### **5.6.3.7. Test result**

At a significance level of 5%, the test result is that the null hypothesis cannot be rejected.

#### **5.6.3.8. Conclusion**

It has to be concluded from the test result that there is no significant difference between the average combined return of non-owner managed companies and owner-managed companies at the 95% confidence level.

## Chapter 6 - Discussion of Results

### 6.1. Statistical Inference

#### 6.1.1. Combined Returns

The hypothesis testing of the combined returns yielded a result of no significant difference between the growth rates of non-owner managed and owner-managed companies. It is not possible then to conclude definitively otherwise. This does not mean that differences do not exist between the growth rates of the two groups but that the differences between the average growth rates for the two groups are small compared to the variations in growth rate, measured by the standard deviation. In the case of the combined returns the difference in average quarterly growth rates over the period of analysis is:

$$\begin{aligned}\text{difference} &= \text{OM average growth} - \text{NOM average growth} \\ &= 12.44\% - 10.37\% \\ &= 2.07\%\end{aligned}$$

Where

OM average growth = average quarterly growth for owner-managed companies; and

NOM average growth = average quarterly growth for non-owner managed companies.

The standard deviations for the two groups are as follows:

$$\text{owner-managed} = 8.11\%; \text{ and}$$



non-owner managed = 9.68%.

The relatively large variations in the growth rates from quarter to quarter, as indicated by the standard deviations, compared to the relatively small difference between the two mean growth rates, 2.07%, indicate that statistically it is not possible to be at least 95% confident that a difference actually exists between the average growth rates of two groups.

### ***6.1.2. Returns through price changes***

The situation is exactly the same, when considering returns through price changes only, as that for the combined returns. Statistically it cannot be stated with greater than 95% confidence that a difference exists between the average growth rates, due to share price changes, between the two groups. The reasons for this are also identical to those for the combined returns.

The difference between the average quarterly growth rates due to share price changes is:

$$\begin{aligned}
 \text{difference} &= \text{OM average growth} - \text{NOM average growth} \\
 &= 11.26 \% - 8.29 \% \\
 &= 2.97\%
 \end{aligned}$$

Where

OM average growth = average quarterly growth for owner-managed companies; and

NOM average growth = average quarterly growth for non-owner managed companies.

The standard deviations for the two groups are as follows:

owner-managed = 7.88 %; and  
non-owner managed = 9.54 %.

Again the relatively large variations in the growth rate from quarter to quarter, as indicated by the standard deviations, compared to the relatively small difference between the two mean growth rates, 2.97%, indicate that statistically it is not possible to be at least 95% confident that a difference actually exists between the average growth rates of two groups.

### ***6.1.3. Returns through dividend distributions***

The same cannot be said for the returns through dividend distributions. The difference seen between the average returns through dividend distributions of non-owner managed companies and owner-managed companies is statistically significant at the 95% confidence level. This does not mean that the difference between the average growth rates during the period of analysis will remain constant across all periods. It does mean that you can definitively state that a difference does exist and that it will be on average approximately equal to the difference between the averages seen across the period of analysis. This difference in average quarterly growth rate across the period of analysis due to dividend distributions is:

difference = NOM average return – OM average return  
= 2.08 % - 1.22 %  
= 0.84 %

Where

OM average return = average quarterly return for owner-managed companies; and

NOM average return = average quarterly return for non-owner managed companies.

## 6.2. Descriptive Statistics

### 6.2.4. Combined Returns

Even though it is not possible to definitively state that there is a difference in the average combined growth rate for the two groups it is worth assessing the data in a broad descriptive manner. The average difference between the quarterly growth rates, 2.07%, as calculated in section 6.1.1, is the real difference during the period of analysis and the effect that this has on an investment initiated at the beginning of the period of analysis can be seen in figure 6 of chapter 5.

The difference in cumulative returns over this period is large, and is calculated below:

$$\begin{aligned}
 \text{difference} &= \text{OM cumulative returns} - \text{NOM cumulative returns} \\
 &= 1010.54\% - 636.45\% \\
 &= 373.99\%
 \end{aligned}$$

Where

OM cumulative returns = cumulative returns for owner-managed companies; and

NOM cumulative returns = cumulative returns for non-owner managed companies.

This is substantial enough to make it worthwhile for the difference in returns to be taken into consideration by investors.

By simple observation it can be seen from figure 6 in chapter 5, that the cumulative returns were essentially the same from January 2002 to the third quarter 2005. Thereafter there is a divergence of the returns, with owner-managed companies showing a greater return than non-owner managed companies. The difference between the returns from third quarter 2005 to the end of the period of analysis in June 2007 is as follows:

$$\begin{aligned}
 \text{difference} &= (\text{OM}_{2\text{Q } 2007} - \text{OM}_{3\text{Q } 2005}) - (\text{NOM}_{2\text{Q } 2007} - \text{NOM}_{3\text{Q } 2005}) \\
 &= (1010.54\% - 334.13) - (636.45\% - 330.85\%) \\
 &= 370.81\%
 \end{aligned}$$

Where

$\text{OM}_{2\text{Q } 2007}$  = cumulative return up to the 2<sup>nd</sup> quarter 2007 - owner-managed; and

$\text{NOM}_{2\text{Q } 2007}$  = cumulative return up to the 2<sup>nd</sup> quarter 2007 - non-owner managed.

This confirms that there are really two distinct periods within the period of analysis. The first period, where the combined returns were essentially the same for the two groups and the second period, where the owner-managed companies outperform the non-owner managed companies. It is interesting to note that in the period January 2002 to December 2004, owner-managed companies outperform the non-owner managed companies in 5 out of the 11 quarters, while in the period January 2005 to June 2007

owner-managed companies outperformed the non-owner managed companies all 10 quarters.

The periodicity naturally needs more investigation before there can be any certainty over what the causes of it are. Conceivably it could be related to issues such as global economic cycles, domestic economic conditions, or even industry specific factors.

### ***6.2.5. Returns through price changes***

A surprising result of the statistical analysis is that the returns through share price changes are not statistically significantly different, as discussed in section 5.6.1, but still, the largest difference in returns between the two groups is due to the very same share price changes. The comparison between the cumulative combined returns and the cumulative returns due to share price changes revealed that returns due to share price changes are the dominant form of return.

The overall difference in cumulative returns due to share price changes is as follows:

$$\begin{aligned} \text{difference} &= \text{cumulative return owner-managed} - \text{cumulative return non-owner} \\ \text{managed} & \\ &= 791.81 \% - 393.65 \% \\ &= 398.16 \% \end{aligned}$$

Compared to the difference in cumulative combined returns of 370.81%, as calculated in section 6.2.1.

The periodic nature of the returns as seen in the combined returns, is also present in the returns due to share price changes. They are in fact one and the same thing, the dominance of the share price changes on the overall returns means that periodicity in the one is also observed in the other. In the period January 2002 to December 2004, the non-owner managed companies outperformed the owner-managed companies in six of the 11 quarters whereas in the following 10 quarters, from January 2005 until June 2007, the owner-managed companies outperformed the non-owner managed companies in every single quarter. During the earlier period, January 2002 to December 2004, cumulative returns between the two groups are very similar, 140.15% and 136.89% respectively, see appendix 3 and figure 4 in chapter 5. The scope of this research does not allow investigation into the reasons behind the periodicity but the fact that periodicity is present indicates that the relationship between the growth rates of the two groups due to share price changes is not fixed in absolute terms, or a fixed ratio. The difference varies over time but on average the owner-managed companies outperform the non-owner managed companies.

The ally, and the enemy, of the investor is compounding. Compounding of returns causes cumulative growth to be exponential, small differences in growth rates between the groups from quarter to quarter will consequently produce greater and greater absolute differences over time. The difference in cumulative returns consequently changes exponentially. In figure 4 and figure 6 of chapter 5, divergence in growth of an exponential nature is evident. This also holds true when growth is negative, in which case losses accumulate exponentially. It is for this reason, that even though the difference in average growth between the two groups is not statistically significant, that the difference is still substantial enough to warrant consideration by investors.

### ***6.2.6. Returns through dividend distributions***

A less surprising result of the analysis was the contrast between the returns obtained through share price changes and those obtained through dividend distributions. Non-owner-managed companies showed lower returns during the period of analysis due to share price changes but showed greater returns from dividend distributions. The difference in returns due to dividend distributions is significant at the 95% confidence level.

## **6.3. Agency theory**

The evidence gathered in this research indicates that there is a difference in the returns generated by owner-managed companies compared to non-owner managed companies. By deduction this means that the decision making process in owner-managed companies is different to that in non-owner managed companies. This must be the case when a statistically significant difference between the dividend distributions of the two groups exists. There can be only one explanation for this difference in behaviour of the two groups of companies and that is that the objectives, pressures and incentives under which the ownership and management of the two groups operate is also different.

The discussion in chapter 2 considered two possibilities, the first being that an agency relationship between the owner and the manager in a non-owner managed company could never generate returns equal to or better than those achieved in a similar owner-managed company due to the costs of maintaining the agency relationship (Berle and Means, 1932). The second possibility was that professional managers operating in non-owner-managed companies could outperform similar owner-managed companies

because, as professional managers, they had a greater ability to manage effectively than an owner would have, consequently it would be possible for non-owner managed companies to outperform owner-managed companies even though the agency cost would still be present (Barth, Gulbrandsen and Schone, 2004). Regardless of whether owner-managed companies outperform non-owner managed companies or not, from an investment perspective, a significant difference in the nature of the returns with dividends being significantly greater in non-owner managed companies, indicates that agency theory is at work.

#### **6.4. Agency costs**

That the nature of the returns generated by owner-managed companies and those generated by non-owner managed companies are different has been definitively proven beyond doubt. The assumption that owner-managed companies outperform non-owner managed companies from an investment perspective is not definitive. It can, however, be stated that during the period of analysis, owner-managed companies on average outperformed non-owner managed companies by 2.07% per quarter. There is consequently some evidence that owner-managed companies outperform non-owner managed companies. Agency costs as discussed in chapter 2 (Jensen and Meckling, 1976) are the costs associated with incentivising and monitoring the performance of an agent to perform in a way which maximises the returns for the shareholders. Jensen and Meckling (1976), propose that these costs also include any losses in performance due to the agency relationship. The results obtained here indicate that even if there is a difference between the performances of the two groups of companies, the difference is relatively small. This fact is borne out by the lack of significance at the 95% confidence



level of the difference between the combined returns for the two groups of companies. It must therefore be concluded that the agency costs are equally insignificant.

It must be noted that even though the difference, read agency costs, between the returns of two groups of companies is insignificant, there might still be some small difference and through compounding of returns the difference in the relative returns over time could still be substantial. Cumulative returns charts in chapter 5 (figures 4, 5 and 6) bear this out.

## **6.5. Incentives**

In chapter 2 it was discussed how incentives offered to professional managers influence their behaviour (Jensen, 1994). The agency relationship is highly dependent on the employment contract of the professional manager and the incentives which it offers. It is not possible to know what elements determine the difference in behaviour between the managers of the two groups of companies. It is sufficient, in this case, to say that since the agency relationship is determined by the interactions between the agent and the principal and the formal contract in place between them, that the incentives inherent in such contract have a very influential role in determining the behaviour of the managers of non-owner managed companies. The difference in dividend distributions may possibly be a reflection of how incentives affect the decision making of owners of non-owner managed companies as well.

## **6.6. Earnings for growth and earnings for distribution**

To understand why non-owner managed companies produce a greater return to shareholders through dividend distributions than owner-managed companies a number of factors need to be considered. These are:

1. The maturity of the company;
2. The overall level of earnings; and
3. The owner to manager relationship.

### ***6.6.1. Maturity of the company***

Companies that have reached maturity are more likely to distribute dividends than companies which are still expanding strongly. It is normal for mature companies to have fewer opportunities for capital expenditure and consequently have less need to retain earnings. It is natural then to expect the earnings to be distributed to shareholders in the form of dividends.

It is not known what the relative makeup is of the companies in the non-owner managed group compared to those in the owner-managed group. It would be interesting to know whether one group contains on average, more mature companies than the other. Should the average maturity of the two groups of companies be substantially different, it would explain why the dividend distributions are also significantly different. One could postulate that often companies start out being owner-managed and as they grow and mature the likelihood of professional managers being employed increases. This would mean that there is an inherent bias of unknown magnitude in the categorisation used in this research. It would also coincide with higher retaining of earnings in the owner-

managed companies and higher dividend payouts in the non-owner managed companies.

### ***6.6.2. The agency relationship***

In sections 6.3 to 6.5, the agency relationship between the owner and the professional manager of the non-owner managed company was discussed in terms of how this affects the behaviour of the manager. What hasn't been explored is the effect that this agency relationship has on the behaviour of the owner. It is possible that the explanation for non-owner managed companies having a higher dividend yield than owner-managed companies is that once management control of the company has been passed to an agent the owner loses a substantial amount of control over the funds retained in the business. The owner could well consider that re-gaining control over the profits of the business is better than leaving the profits in the business, and under the control of the professional manager. This regaining of control would be achieved by insisting that dividends are declared regularly and could be considered favourable despite the proportion going to the minority shareholders. The advantage to the owner would be that these dividends could be invested in a vehicle generating the best returns for him at the time which would not necessarily be within the business. This could explain why non-owner managed companies have been found to distribute dividends at a greater level than owner-managed companies.

The opposite of course, would be true of owner-managed companies, where the owner retains control of the use of all funds in the business, including the retained earnings. The incentive to declare dividends is therefore substantially reduced.

In conclusion it must be emphasised that the reasons for the difference in dividend distributions between the groups of companies is not within the scope of this paper. It is sufficient to note that the difference does exist and that it does affect the nature of the returns which an investor can expect to receive from a company.

## **6.7. Nature of Returns**

The professional manager's behaviour is determined by the agency relationship. This includes the incentives that are in place by the principal and other less tangible pressures and demands which are placed on the agent. It can be concluded that the effectiveness of these incentives and demands has a greater effect on the nature of the returns than on the overall return. The difference in the makeup of the returns between the two groups of companies, that is the proportion of the overall return which is made up of dividends, is confirmed by the statistical significance in the difference between the average dividend distributions of the two groups of companies, as well as the lack of statistical significance in the difference between the average combined returns of the two groups of companies.

## Chapter 7 - Conclusion

The obvious conclusion to be drawn from this research is that there is that there is no definitive evidence to support the theory that there is a difference in performance between owner-managed and non-owner managed companies. This is a broad statement which has been confirmed to be true through statistical means. This is not the full story, however, because, to coin a phrase, the devil is in the detail. Looking more closely at the results it becomes evident that there are differences in the performance of the two groups of companies, most noticeably in the nature of the returns. The proportion of the overall return that an investor would receive in dividends is different for the two groups of companies, with non-owner managed companies displaying greater dividend returns.

Even though the results have been tested statistically for significance, there is good reason to believe that period effects are present. The descriptive analysis of the data indicated that this was the case within the period of analysis and consequently it could be expected to occur during other periods as well. The extended “bull run” of the South African stock market over the period of analysis could well have had a distorting effect on the results. This conclusion is based on the dominance of share price gains over dividend based returns.

It should be borne in mind also that the results are very specific to the definition of owner-managed and the criteria of performance. The criteria of performance used in this paper have been specifically chosen to give results that would be useful to investors.

It has been discussed in Chapter 6 that agency theory plays a part in the difference in the nature of returns between the two groups of companies but there are additional factors which could also be present, and in fact more dominant, in determining the differences in returns. The additional factors include issues such as company maturity and earnings levels.

## **7.1. Recommendations to Investors**

Although it has proven to be statistically insignificant, the power of compounding allows even apparently insignificant differences to become vastly significant differences over time. It is for this reason that ownership structure should be considered as a variable in the APT model and the coefficients should reflect the difference in returns obtained over the period, this has been proven to be 9.38% per annum over the period of the study. The lack of statistical significance should make the investor wary, however, and the actual returns between owner-managed and non-owner managed should be routinely confirmed and the coefficients in the model adjusted accordingly.

The dividend distributions are significantly greater statistically in non-owner managed companies and therefore, for investors requiring an income stream as part of their investment returns, there is a clear indication that non-owner managed companies should be favoured.

## **7.2. Recommendations for future research**

- Investigating sub-category effect in the owner-managed group by considering founder owner and descendent owner-managed groups

- Extend to other sectors of the stock exchange to assess the industry affect.
- Investigate the effect of different periods covering different economic conditions on the results.
- Investigation into the earnings levels of the two groups of companies.
- Assessing the company maturity as a factor in determining investor returns.

## References

- Anderson, R., Mansi, S. and Reeb, D. (2003) Founding Family Ownership and the agency cost of debt, *The Journal of Financial Economics*, 68, 263-285
- Anderson, R. and Reeb, D. (2003) Founding Family Ownership and Firm Performance: Evidence from the S&P 500, *The Journal of Finance*, Vol. LVIII, no. 3, 1301-1328
- Barth, E., Gulbrandsen, T. and Schone, P. (2004) Family Ownership and Productivity: the role of owner-management, *Journal of Corporate Finance*, 3, 60-73
- Berle, A and Means, G. (1932) *The Modern Corporation and Private Property*, New York: Macmillan
- Chung, K and Pruitt, S. (1994) A Simple Approximation of Tobin's q, *Financial Management*, 23, 3, 70-74
- Demsetz, H (1983) The Structure of Ownership and the Theory of the Firm, *Journal of Law and Economics*, Vol. 26, no. 2, 375-390
- Demsetz, H. and Lehn, K. (1985) The Structure of Corporate Ownership: Causes and Consequences, *Journal of Political Economy*, Vol. 93 no. 6, 1155-1177
- Demsetz, H. and Villalonga, B. (2001) Ownership Structure and Corporate Performance, *Journal of Corporate Finance*, 7, 209-233
- Fama, E. and Jensen, M. (1983) Separation of Ownership and Control, *Journal of Law and Economics*, Vol. 26, No. 2, 301-325
- Gorriz, C. and Fumas, V. (1996) Ownership Structure and Firm Performance: Some Empirical Evidence from Spain, *Managerial and Decision Economics*, Vol. 17, 6, 575-586



Hertzberg, F., Mausner, B. and Snyderman, B. (1959) *The Motivation to Work*, New York: John Wiley

Jensen, M. (1994) Self-Interest, Altruism, Incentives and Agency Theory, *Journal of Applied Corporate Finance*, Vol. VII, no. 2, 1-16

Jensen, M & Meckling, W (1976) Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3, 305-360

Landes, D. (1999) *The Wealth and Poverty of Nations*. New York: Norton and Company

Postrel, S. and Rumelt, R. (1992) Incentives, Routines and Self-Command, *Industrial and Corporate Change*, 1, 397-425

Shung, E.S., Stadler, D.A. and Affleck-Graves, J.F (2002) The performance of family controlled companies on the JSE: a financial and investment evaluation, *Investment Analysts Journal*, no. 29, part 1

Smith, A. (1976) *The Wealth of Nations*. Oxford: Oxford University Press.

Stroh, L., Brett, J., Baumann, J. and Reilly, A. (1996) Agency Theory and Variable Pay Compensation Strategies, *Academy of Management Journal*, Vol. 39, no. 3, 751-767

Villalonga, B & Amit, R (2004) How do family ownership, control and management affect firm value? *Harvard Business School and Wharton working paper*, 2004

(2007) *Who Owns Whom*, Cape Town: CTP Book Printers

(2004) *Who Owns Whom*, Cape Town: CTP Book Printers

(2003) *Who Owns Whom*, Cape Town: CTP Book Printers

**Appendix 1 – All companies forming the sample  
(before cleaning)**

## Complete share list

All shares listed on the industrial and financial sectors of the main board, the venture capital board and the development capital board of the JSE in the period of analysis

<u>Alpha Code</u>	<u>Equity Name</u>
ABC	Abacus Technology Hldgs
ABL	African Bank Investments
ABO	Absolute Holdings Ltd
ABT	Ambit Properties Ltd
ACP	Acucap Properties Ltd
ADR	Adcorp Hldgs Ltd Ord
AEC	Anbeeco Investment Hldgs
AEG	Aveng Ltd
AER	Amalgamated Elec Corp Ld
AFB	Alexander Forbes Ltd
AFI	African Life Assurance
AFT	Afrimat Ltd
AGI	Ag Industries Ltd
AHV	African Harvest Ltd
ALD	Aludie Ltd
ALE	Appleton Ltd
ALX	Alex White Holdings Ltd
ALY	Alacrity Financial Servi
AMB	Amb Holdings Ltd
APA	Apexhi Properties -A-
APB	Apexhi Properties -B-
APK	Astrapak Ltd
APP	Amb Private Equity Ptnrs
AQL	Aquila Growth Ltd
ARC	Arcay Group Ltd
ART	Argent Industrial Ltd
ASA	Absa Group Limited
ASO	Austro Group Limited
ATN	Allied Electronics Corp
ATS	Atlas Properties Ltd
AXC	Apexhi Properties -C-
BAT	Brait S.A.
BAW	Barloworld Ltd
BCF	Bowler Metcalf Ltd
BDEO	Bidvest Call Options
BDM	Buildmax Ltd
BEL	Bell Equipment Ltd
BIC	Bicc Cafca Ltd
BJM	Barnard Jacobs Mellet
BNT	Bonatla Property Hldgs
BOE	Boe Ltd Ord
BRN	Brimstone Investment -N-
BRT	Brimstone Investmnt Corp
BSR	Basil Read Hldgs Ltd
BVT	Bidvest Ltd Ord
CAE	Cape Empowerment Trust
CAL	Chariot Land Ltd
CBD	C B D Property Fund
CBS	Cbs Property Portfolio
CDZ	Cadiz Holdings Ltd
CEN	Centrecity Property Fund
CFC	Commercial Fin Co Ltd
CLE	Cientele Life Assurance
CLO	Calulo Property Fund Ltd
CMA	Command Holdings Ltd
CMG	Cenmag Holdings Ltd
CML	Coronation Fund Mngrs Ld
CNC	Concor Ltd Rcon
CND	Conduit Capital Ltd
CNF	Congella Federation Ltd
CNL	Control Instruments Grp
CPA	Corpcapital Ltd
CPI	Capitec Bank Hldgs Ltd
CPL	Capital Property Fund
CPT	Capital Alliance Hldg Ld
CRG	Cargo Carriers Ltd
CRH	Coronation Holdings Ltd



<u>Alpha Code</u>	<u>Equity Name</u>
CRM	Ceramic Industries Ltd
CRN	Coronation Hldgs Ltd -N-
CRW	Corwil Investments Ltd
CSL	Consol Ltd
CTH	Community Technologies
CTL	Coastal Group Ltd
CVS	Corvus Cap (Sa) Hldg Ltd
CYD	Cycad Financial Hldgs Ld
DAW	Distribution And Warehsg
DEC	Decillion Ltd
DECD	Decillion Ltd Conv Deb
DEL	Delta Electrical In
DGC	Digicore Holdings Ltd
DIV	Diversified Prop Fund Ld
DLV	Dorbyl Ltd Ord
DSY	Discovery Holdings Ltd
ELR	Elb Group Ltd Ord
EMI	Emira Property Fund
ENV	Enviroserv Holdings Ltd
ERM	Enterprise Risk Mngment
EUR	Eureka Ind Ltd Ord
EXL	Excellerate Hldgs Ltd
EXLD	Excellerate Hldgs Condeb
FBF	Fbc Fidelity Bank Hldgs
FDS	Fedsure Holdings Ltd
FEQ	Fe Squared Holdings Ltd
FGM	Masterfridge Ltd
FPT	Fountainhead Prop Trst
FSP	Freestone Property Hldgs
FSR	Firststrand Ltd
FVT	Fairvest Property Hldgs
GBL	Genbel South Africa Ltd
GDC	Good Cape Ltd
GLE	Gold Edge Holdings Ltd
GMB	Glenrand M.I.B. Ltd
GMF	Gencor Ltd
GND	Grindrod Ltd
GNK	Grintek Ltd
GRF	Group Five Ltd Ord
GRT	Growthpoint Prop Ltd
GRY	Allan Gray Property Trst
HCI	Hosken Cons Invest Ltd
HDC	Hudaco Industries Ltd
HPA	Hospitality Prop Fund A
HPB	Hospitality Prop Fund B
HWN	Howden Africa Hldgs Ltd
HXT	Hix Technologies Ltd
HYP	Hyprop Investments Ltd
ICC	Indus Credit Co Africa H
ICT	Incentive Holdings Ltd
IDQ	Indequity Group Ltd
IFA	Ifanet Ltd
IFR	Ifour Properties Ltd
ILA	Iliad Africa Ltd
IND	Independent Financial Se
INH	Investec Holdings Ltd
INL	Investec Ltd
INP	Investec Plc
INS	Insur Outsourcng Manager
IOT	Iota Financial Serv Ltd
IPL	Imperial Holdings Ltd
IPR	Iprop Holdings Ltd
IST	Ist Group Ltd
ITG	Integrear Ltd
IVT	Invicta Holdings Ltd
JDH	John Daniel Holdings Ltd
JGS	Jigsaw Holdings Ltd



<u>Alpha Code</u>	<u>Equity Name</u>
JNC	Johnnic Holdings Ltd
JSC	Jasco Electronics Hldgs
JSE	Jse Ltd
KAP	Kap International Hldgs
KEL	Kelly Group Ltd
KHO	Kirchmann-Hurry Prop Ltd
KIR	Kairos Industrial Hldgs
KTL	Kunene Technology Ltd
LAB	Labat Africa Ltd
LBH	Liberty Holdings Ltd Ord
LBT	Liberty Internationl Plc
LGL	Liberty Group Ltd
LNf	London Fin Inv Grp Plc
LNFO	Lonfin Fin Inv Grp Opt
LYS	Lyons Fin Solutions Hldg
MAF	Mutual And Federal Ins
MAS	Masonite Africa Ltd Ord
MBN	Mobile Industries -N-
MCP	Micc Property Income Fnd
MCU	M Cubed Hldgs Ltd
MDN	Madison Prop Fund Mngrs
MEL	Mettle Ltd
MET	Metropolitan Hldgs Ltd
MFL	Metrofile Holdings Ltd
MKL	Makalani Holdings Ltd
MMG	Micromega Holdings Ltd
MOB	Mobile Industries Ord
MOBD	Mobile Ind 6% Conv Deb
MPL	Metboard Properties Ltd
MRN	Marshalls Ltd -N-
MSS	Marshalls Ltd
MTE	Monteagle Societe Anonym
MTL	Mercantile Bank Hldgs Ld
MTP	Martprop Property Fund
MUR	Murray And Roberts H Ord
MVG	Mvelaphanda Group Ltd
MYT	Monyetla Property Fund Ltd
NCA	New Corpcapital Ltd
NCX	National Chick Ltd
NED	Nedbank Group Ltd
NEI	Northern Eng Ind Afr Ltd
NIB	Nedcor Invest. Bank Hldg
NPK	Nampak Ltd Ord
NRB	Nrb Holdings Ltd Ord
OCT	Octodec Invest Ltd
OML	Old Mutual Plc
ORE	Orion Real Estate Ltd
OZZ	Ozz Ltd
PAP	Pangbourne Prop Ltd
PDM	Paradigm Capital Hldgs
PFN	Consol Prop And Fin Ltd
PGH	Psg Invest Bank Hldgs Ld
PGR	Peregrine Holdings Ltd
PMG	Primegro Properties Ltd
PML	Premier Group Ltd
PMM	Premium Properties Ltd
PMV	Primeserv Group Ltd
PNR	Pioneer Property Fund
POW	Power Technologies Ord
PPC	Pretoria Port Cemnt
PPE	Purple Capital Ltd
PPR	Putprop Ltd
PRA	Paramount Prop Fund Ltd
PRM	Prima Property Trust
PRO	Proper Group Ltd
PSC	Pasdec Resources Sa Ltd
PSG	Psg Group Limited



<u>Alpha Code</u>	<u>Equity Name</u>
QUY	Quyn Holdings Ltd
RAH	Real Africa Hldgs Ltd
RAI	Real Africa Invest Ltd
RBX	Raubex Group Ltd
RDF	Redefine Income Fund Ltd
REM	Remgro Ltd
RES	Resilient Prop Inc Fd Ld
RGL	Regal Treasury Bank Hld
RHW	Richway Retail Prop Ltd
RLO	Reunert Ord
RMH	Rmb Holdings Ltd
RNT	Rentsure Holdings Ltd
RPR	Rand Leases Prop Ltd
RRM	Rrm Investment Hldgs Ltd
SAC	Sa Corp Real Estate Fund
SAE	Sa Eagle Insurance Co
SBK	Standard Bank Group Ltd
SBL	Sable Hldgs Ltd Ord
SBO	Saambou Holdings Ltd
SBV	Sabvest Ltd
SFA	Shops For Africa Ltd
SFN	Sasfin Holdings Ltd
SGG	Sage Group Ltd
SJL	S And J Land Holdings
SKJ	Sekunjalo Investments Ld
SLL	Stella Vista Technol Ltd
SLM	Sanlam Ltd
SLU	Investment Solutions Hld
SMH	Smg Holdings Ltd
SMR	Samrand Develop Hldgs Ld
SNT	Santam Ltd
SOH	South Ocean Holdings Ltd
SPE	Spearhead Prop Hldgs Ltd
SPG	Super Group Ltd
SRB	Sa Reserve Bank
SRL	Sa Retail Properties Ltd
STA	Stratcorp Ltd
STO	Setpoint Technology Hldg
SUM	Spectrum Shipping Ltd
SVN	Sabvest Ltd -N-
SYA	Siyathenga Property Fund
SYC	Sycom Property Fund
TBE	Thebe Financial Services
TED2	Trencor Ltd 6%Conv Deb
TGN	Tigon Ltd
TMT	Trematon Capital Inv Ltd
TOC	Toco Holdings Ltd
TPC	Transpaco Ltd
TRE	Trencor Ltd
TRF	Terrafin Holdings Ltd
TSC	Tisec Ltd
VKE	Vukile Property Fund Ltd
VLE	Value Group Ltd
VLY	Velocity Holdings Ltd
VNF	Venfin Ltd
VTL	Venter Leisure And Comm
VTR	Vestacor Ltd
WBO	Wilson Bayly Hlm-Ovc Ord
WLN	Wooltru Ltd-N-
WLO	Wooltru Ltd Ord
WNH	Winhold Ltd Ord
WPH	Women Investment Portfol
YBG	Yabeng Inv Hldg Company
ZED	Zeder Investments Ltd
ZPT	Zaptronix Ltd
ZRR	Zarara Energy Ltd

## **Appendix 2 – Final group lists**

**(after exclusions)**

Final grouping of companies (cleaned)

<u>Non-owner managed</u>		<u>Owner-managed</u>	
Alpha Code	Equity Name	Alpha Code	Equity Name
ASA	Absa Group Limited	ABO	Absolute Holdings Ltd
ACP	Acucap Properties Ltd	AFT	Afrimat Ltd
ADR	Adcorp Hldgs Ltd Ord	AGI	Ag Industries Ltd
ABL	African Bank Investments	ALX	Alex White Holdings Ltd
AHV	African Harvest Ltd	ATN	Allied Electronics Corp
AFI	African Life Assurance	AER	Amalgamated Elec Corp Ld
ALY	Alacrity Financial Servi	AEC	Anbeeco Investment Hldgs
AFB	Alexander Forbes Ltd	AQL	Aquila Growth Ltd
GRY	Allan Gray Property Trst	ARC	Arcay Group Ltd
ALD	Aludie Ltd	ART	Argent Industrial Ltd
AMB	Amb Holdings Ltd	ATS	Atlas Properties Ltd
APP	Amb Private Equity Ptnrs	ASO	Austro Group Limited
ABT	Ambit Properties Ltd	BJM	Barnard Jacobs Mellet
APA	Apexhi Properties -A-	BEL	Bell Equipment Ltd
ALE	Appleton Ltd	BNT	Bonatla Property Hldgs
APK	Astrapak Ltd	BCF	Bowler Metcalf Ltd
AEG	Aveng Ltd	BAT	Brait S.A.
BAW	Barloworld Ltd	BRT	Brimstone Investmnt Corp
BSR	Basil Read Hldgs Ltd	CDZ	Cadiz Holdings Ltd
BIC	Bicc Cafca Ltd	CLO	Calulo Property Fund Ltd
BVT	Bidvest Ltd Ord	CAE	Cape Empowerment Trust
BOE	Boe Ltd Ord	CRG	Cargo Carriers Ltd
BDM	Buildmax Ltd	CBS	Cbs Property Portfolio
CBD	C B D Property Fund	CMG	Cenmag Holdings Ltd
CPT	Capital Alliance Hldg Ld	CRM	Ceramic Industries Ltd
CPL	Capital Property Fund	CAL	Chariot Land Ltd
CPI	Capitec Bank Hldgs Ltd	CTL	Coastal Group Ltd
CEN	Centrecity Property Fund	CMA	Command Holdings Ltd
CLE	Clientele Life Assurance	CND	Conduit Capital Ltd
CFC	Commercial Fin Co Ltd	PFN	Consol Prop And Fin Ltd
CNC	Concor Ltd Recon	CNL	Control Instruments Grp
CNF	Congella Federation Ltd	CML	Coronation Fund Mngrs Ltd
CSL	Consol Ltd	CVS	Corvus Cap (Sa) Hldg Ltd
CRH	Coronation Holdings Ltd	CYD	Cycad Financial Hldgs Ld
CPA	Corpcapital Ltd	DEC	Decillion Ltd
CRW	Corwil Investments Ltd	DGC	Digicore Holdings Ltd
DEL	Delta Elecricl In	ELR	Elb Group Ltd Ord
DSY	Discovery Holdings Ltd	ERM	Enterprise Risk Mngment
DAW	Distribution And Warehsg	EUR	Eureka Ind Ltd Ord
DIV	Diversified Prop Fund Ld	EXL	Excellerate Hldgs Ltd
DLV	Dorbyl Ltd Ord	FVT	Fairvest Property Hldgs
EMI	Emira Property Fund	GLE	Gold Edge Holdings Ltd
ENV	Enviroserv Holdings Ltd	GDC	Good Cape Ltd
FBF	Fbc Fidelity Bank Hldgs	GND	Grindrod Ltd
FDS	Fedsure Holdings Ltd	IFA	Ifanet Ltd
FSR	Firststrand Ltd	ICT	Incentive Holdings Ltd
FPT	Fountainhead Prop Trst	IND	Independent Financial Se
FSP	Freestone Property Hldgs	IDQ	Indequity Group Ltd
GBL	Genbel South Africa Ltd	ICC	Indus Credit Co Africa H
GMF	Gencor Ltd	ITG	Integrear Ltd
GMB	Glenrand M.I.B. Ltd	JSC	Jasco Electronics Hldgs
GNK	Grintek Ltd	JDH	John Daniel Holdings Ltd
GRF	Group Five Ltd Ord	KIR	Kairos Industrial Hldgs
GRT	Growthpoint Prop Ltd	KHO	Kirchmann-Hurry Prop Ltd
HXT	Hix Technologies Ltd	KTL	Kunene Technology Ltd
HCI	Hosken Cons Invest Ltd	LNF	London Fin Inv Grp Plc
HPA	Hospitality Prop Fund A	MDN	Madison Prop Fund Mngrs
HWN	Howden Africa Hldgs Ltd	MKL	Makalani Holdings Ltd
HDC	Hudaco Industries Ltd	MSS	Marshalls Ltd
HYP	Hyprop Investments Ltd	FGM	Masterfridge Ltd
IFR	Ifour Properties Ltd	MMG	Micromega Holdings Ltd
ILA	Iliad Africa Ltd	MOB	Mobile Industries Ord
IPL	Imperial Holdings Ltd	MTE	Monteagle Societe Anonym
INS	Insur Outsourcng Manager	NCA	New Corpcapital Ltd
INH	Investec Holdings Ltd	NRB	Nrb Holdings Ltd Ord
INL	Investec Ltd	OCT	Octodec Invest Ltd
INP	Investec Plc	ORE	Orion Real Estate Ltd
SLU	Investment Solutions Hld	OZZ	Ozz Ltd
IVT	Invicta Holdings Ltd	PGR	Peregrine Holdings Ltd
IOT	Iota Financial Serv Ltd	POW	Power Technologies Ord
IPR	Iprop Holdings Ltd	PMM	Premium Properties Ltd



Final grouping of companies (cleaned)

<u>Non-owner managed</u>		<u>Owner-managed</u>	
Alpha Code	Equity Name	Alpha Code	Equity Name
IST	Ist Group Ltd	PMV	Primeserv Group Ltd
JGS	Jigsaw Holdings Ltd	PRO	Proper Group Ltd
JNC	Johnnic Holdings Ltd	PSG	Psg Group Limited
JSE	Jse Ltd	PGH	Psg Invest Bank Hldgs Ld
KAP	Kap International Hldgs	PPE	Purple Capital Ltd
KEL	Kelly Group Ltd	PPR	Putprop Ltd
LAB	Labat Africa Ltd	QUY	Quyn Holdings Ltd
LGL	Liberty Group Ltd	RPR	Rand Leases Prop Ltd
LBH	Liberty Holdings Ltd Ord	RBX	Raubex Group Ltd
LBT	Liberty International Plc	RGL	Regal Treasury Bank Hld
LYS	Lyons Fin Solutions Hldg	REM	Remgro Ltd
MCU	M Cubed Hldgs Ltd	RNT	Rentsure Holdings Ltd
MTP	Martprop Property Fund	RHW	Richway Retail Prop Ltd
MAS	Masonite Africa Ltd Ord	SJL	S And J Land Holdings
MTL	Mercantile Bank Hldgs Ld	SBL	Sable Hldgs Ltd Ord
MPL	Metboard Properties Ltd	SBV	Sabvest Ltd
MFL	Metrofile Holdings Ltd	SMR	Samrand Develop Hldgs Ld
MET	Metropolitan Hldgs Ltd	SFN	Sasfin Holdings Ltd
MEL	Mettle Ltd	SKJ	Sekunjalo Investments Ld
MCP	Micc Property Income Fnd	STO	Setpoint Technology Hldg
MYT	Monyetla Property Fund Ltd	SFA	Shops For Africa Ltd
MUR	Murray And Roberts H Ord	SMH	Smg Holdings Ltd
MAF	Mutual And Federal Ins	SUM	Spectrum Shipping Ltd
MVG	Mvelaphanda Group Ltd	SLL	Stella Vista Technol Ltd
NPK	Nampak Ltd Ord	STA	Stratcorp Ltd
NCX	National Chick Ltd	SPG	Super Group Ltd
NED	Nedbank Group Ltd	TGN	Tigon Ltd
NIB	Nedcor Invest. Bank Hldg	TPC	Transpaco Ltd
NEI	Northern Eng Ind Afr Ltd	TMT	Trematon Capital Inv Ltd
OML	Old Mutual Plc	TRE	Trencor Ltd
PAP	Pangbourne Prop Ltd	VLE	Value Group Ltd
PRA	Paramount Prop Fund Ltd	VLY	Velocity Holdings Ltd
PSC	Pasdec Resources Sa Ltd	VTL	Venter Leisure And Comm
PNR	Pioneer Property Fund	VTR	Vestacor Ltd
PPC	Pretoria Port Cemnt	WBO	Wilson Bayly Hlm-Ovc Ord
PRM	Prima Property Trust	ZPT	Zaptronix Ltd
PMG	Primegro Properties Ltd		
RAH	Real Africa Hldgs Ltd		
RAI	Real Africa Invest Ltd		
RDF	Redefine Income Fund Ltd		
RES	Resilient Prop Inc Fd Ld		
RLO	Reunert Ord		
RMH	Rmb Holdings Ltd		
RRM	Rrm Investment Hldgs Ltd		
SAC	Sa Corp Real Estate Fund		
SAE	Sa Eagle Insurance Co		
SRB	Sa Reserve Bank		
SRL	Sa Retail Properties Ltd		
SBO	Saambou Holdings Ltd		
SGG	Sage Group Ltd		
SLM	Sanlam Ltd		
SNT	Santam Ltd		
SYA	Siyathenga Property Fund		
SOH	South Ocean Holdings Ltd		
SPE	Spearhead Prop Hldgs Ltd		
SBK	Standard Bank Group Ltd		
SYC	Sycom Property Fund		
TBE	Thebe Financial Services		
TSC	Tisec Ltd		
VNF	Venfin Ltd		
VKE	Vukile Property Fund Ltd		
WNH	Winhold Ltd Ord		
WPH	Women Investment Portfol		
WLO	Wooltru Ltd Ord		
YBG	Yabeng Inv Hldg Company		
ZRR	Zarara Energy Ltd		
ZED	Zeder Investments Ltd		

## **Appendix 3 – Growth due to share price changes**



Share Price Changes

ownership Alpha Code	Equity Name	2002				2003				2004				2005				2006				2007		
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	
		n	ASA Absa Group Limited	28.34%	-8.53%	6.40%	-6.96%	19.52%	-1.94%	22.29%	10.68%	9.35%	27.65%	16.73%	-0.78%	9.39%	13.72%	7.68%	14.85%	-13.53%	-0.80%	25.73%	11.52%	-5.74%
n	ACP Acucap Properties Ltd	-4.00%	0.00%	2.08%	8.16%	4.72%	0.90%	25.00%	-8.21%	-4.28%	13.82%	14.64%	4.67%	13.69%	20.42%	0.00%	18.26%	-19.12%	11.45%	9.91%	17.11%	-1.77%		
n	ADR Adcorp Hldgs Ltd Ord	5.49%	-36.77%	3.79%	11.11%	24.29%	1.26%	33.94%	22.88%	-5.03%	19.83%	2.42%	10.95%	-4.00%	25.56%	6.19%	14.58%	-20.91%	6.90%	29.03%	13.33%	8.82%		
n	ABL African Bank Investments	12.78%	-12.50%	7.62%	2.48%	7.08%	16.94%	30.21%	26.59%	-1.26%	10.08%	40.88%	-8.74%	11.98%	13.64%	15.29%	22.94%	-7.07%	-21.04%	29.41%	5.94%	-1.32%		
n	AHV African Harvest Ltd	38.46%	-16.67%	13.33%	8.82%	3.78%	0.00%																	
n	AFI African Life Assurance	29.09%	-26.76%	30.77%	-8.09%	6.40%	6.77%	7.75%	2.61%	-15.92%	7.95%	29.47%	19.24%	-2.05%	1.16%	-99.31%								
n	ALY Alacrity Financial Servi	-4.76%	40.00%	-28.57%	30.00%	-19.23%	42.86%	76.67%	-5.66%															
n	AFB Alexander Forbes Ltd	20.61%	-20.25%	10.71%	-25.81%	6.28%	-6.36%	14.08%	-13.19%	-0.10%	11.87%	-6.58%	7.04%	13.16%	11.24%	1.05%	3.10%	-2.34%	9.59%	-2.50%	6.22%	3.50%		
n	GRY Allan Gray Property Trst	6.34%	3.21%	6.67%	16.25%	4.66%	-6.51%	10.26%	0.00%	-0.33%	15.00%	19.42%	2.18%	9.50%	8.89%	8.96%	23.40%	-28.89%	7.50%	18.22%	12.30%			
n	ALD Aludie Ltd	-42.86%	75.00%	42.86%	0.00%	0.00%	-70.00%	266.67%	-18.18%	-44.44%	20.00%													
n	AMB Amb Holdings Ltd	-5.38%	6.50%	-11.45%	4.31%	-0.83%																		
n	APP Amb Private Equity Ptnrs	20.37%	-26.92%	36.84%	-13.85%	10.27%	-0.81%																	
n	ABT Ambit Properties Ltd																							
n	APA Apexhi Properties -A-	8.11%	1.56%	9.23%	4.08%	4.19%	-2.60%	14.00%	-3.51%	0.61%	3.61%	15.12%	1.01%	6.50%	16.53%	6.77%	14.72%	-20.39%	15.29%	5.73%	5.69%	-9.62%		
n	ALE Appleton Ltd	-11.11%	-37.50%	60.00%	0.00%	0.00%																		
n	APK Astrapak Ltd	8.08%	-5.69%	43.40%	1.32%	5.19%	19.75%	50.52%	3.42%	-3.31%	8.22%	47.47%	-9.01%	3.77%	7.27%	14.41%	5.93%	-16.15%	14.68%	-1.16%	-0.74%	13.42%		
n	AEG Aveng Ltd	14.29%	8.13%	15.61%	-16.00%	4.76%	-3.41%	4.59%	-15.64%	-1.33%	16.22%	39.53%	-5.83%	9.29%	35.63%	7.40%	30.63%	-8.72%	28.21%	22.18%	36.90%	8.59%		
n	BAW Barloworld Ltd	1.61%	-6.35%	3.05%	-21.88%	13.16%	5.58%	23.61%	-5.06%	0.08%	17.03%	36.28%	-5.93%	-5.00%	22.41%	-4.95%	20.15%	-8.89%	7.02%	26.64%	10.37%	8.84%		
n	BSR Basil Read Hldgs Ltd	52.00%	-10.53%	2.94%	-40.00%	19.05%	8.00%	8.15%	47.26%	-34.88%	-52.86%	54.55%	-14.71%	22.99%	175.70%	15.25%	95.59%	10.53%	33.33%	28.57%	54.76%	25.64%		
n	BIC Bicc Cafca Ltd	-10.00%	-16.67%	-10.00%	-16.67%	7.77%	-3.37%	20.34%	4.00%	0.96%	20.00%	27.30%	-11.72%	2.68%	26.89%	0.27%	23.24%	-13.38%	14.43%	18.41%	3.13%	4.36%		
n	BVT Bidvest Ltd Ord	10.05%	-7.17%	5.39%	-11.33%	7.77%	-3.37%	20.34%	4.00%	0.96%	20.00%	27.30%	-11.72%	2.68%	26.89%	0.27%	23.24%	-13.38%	14.43%	18.41%	3.13%	4.36%		
n	BOE Boe Ltd Ord	37.60%	-0.29%																					
n	BDM Buildmax Ltd	-13.33%	53.85%	-15.00%	-17.65%	-28.57%	0.00%	60.00%	-37.50%	10.00%	72.73%	189.47%	-9.09%	120.00%	54.55%	-19.41%	35.04%	-27.57%	0.75%	-8.89%	6.50%	37.40%		
n	CBD C B D Property Fund	0.00%																						
n	CPT Capital Alliance Hldg Ld	15.91%	-13.73%	14.20%	-6.17%	4.56%	-3.65%	16.84%	2.70%	5.26%	5.83%	40.55%	2.75%	0.87%										
n	CPL Capital Property Fund	6.67%	-11.36%	25.00%	2.56%	3.00%	-3.88%	22.73%	-9.05%	8.60%	10.00%	27.27%	-4.76%	17.19%	6.67%	8.00%	18.06%	-19.61%	3.66%	12.71%	11.69%	8.41%		
n	CPI Capitec Bank Hldgs Ltd	41.05%	34.33%	41.67%	-9.80%	73.91%	-1.25%	29.37%	13.50%	6.90%	53.23%	34.21%	9.80%	21.50%	25.81%	35.05%	7.27%	-8.06%	6.67%	18.42%	0.00%	8.03%		
n	CEN Centrecity Property Fund	9.47%	-6.25%	15.38%	3.56%	-96.57%	0.00%	-87.50%																
n	CLE Clientele Life Assurance	23.81%	-0.15%	0.15%	-4.62%	4.84%	-3.85%	12.00%	8.57%	6.91%	27.69%	34.94%	12.14%	-4.46%	29.00%	9.17%	20.73%	11.74%	-0.26%	12.68%	22.28%	1.03%		
n	CFC Commercial Fin Co Ltd	19.23%	11.29%	18.84%	-76.10%	13.27%	1.80%	1.77%																
n	CNC Concor Ltd Recon	25.00%	8.57%	6.32%	-10.40%	0.55%	1.10%	3.26%	-6.32%	-1.12%	-4.55%	84.52%	16.19%	19.38%	12.56%	11.82%	0.00%							
n	CNF Congella Federation Ltd	0.00%	1.84%	0.00%	0.00%	0.00%	0.00%	0.00%																
n	CSL Consol Ltd	2.93%	13.74%	-0.42%																				
n	CRH Coronation Holdings Ltd	-2.83%	-10.91%	4.59%	-1.46%	-90.10%	0.00%																	
n	CPA Corpcapital Ltd	1.45%	-12.14%	27.64%	-25.48%	39.32%	6.75%	9.77%	-70.68%	-3.57%	11.11%	21.67%	-69.86%	50.00%	0.00%									
n	CRW Corwil Investments Ltd	15.00%	4.35%	4.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-8.00%	0.00%	0.00%	0.00%								
n	DEL Delta Electrical In	-4.81%	-5.03%	4.23%	-17.55%	-1.78%	6.35%	-9.00%	1.56%	-17.31%	-0.78%	7.19%	-0.87%	26.47%	-2.79%	-22.25%	-39.38%	13.96%	-10.91%	10.00%	-18.14%	-7.72%		
n	DSY Discovery Holdings Ltd	-16.28%	13.89%	-9.76%	-14.86%	18.25%	20.81%	26.11%	10.57%	2.23%	14.58%	27.21%	9.09%	7.84%	-5.45%	12.50%	4.74%	-17.99%	10.95%	20.63%	7.06%	0.80%		
n	DAW Distribution And Warehsg	20.00%	0.00%	33.33%	32.14%	24.32%	3.26%	78.95%	11.18%	26.98%	56.25%	46.67%	-5.45%	15.38%	15.83%	1.44%	30.50%	-7.61%	14.12%	29.48%	27.47%	7.75%		
n	DIV Diversified Prop Fund Ld																							
n	DLV Dorbyl Ltd Ord																							
n	EMI Emira Property Fund																							
n	ENV Enviroserv Holdings Ltd	8.33%	18.46%	23.38%	2.63%	12.82%	7.73%	14.35%	32.84%	-15.00%	2.94%	18.10%	-5.91%	7.14%	14.67%	20.93%	15.38%	-8.33%	16.36%	14.06%	34.25%	26.94%		
n	FBF Fbc Fidelity Bank Hldgs																							
n	FDS Fedsure Holdings Ltd	30.47%																						
n	FSR Firststrand Ltd	15.56%	-14.51%	12.54%	-11.68%	17.54%	-4.45%	22.19%	10.09%	3.77%	18.94%	10.15%	-0.15%	4.05%	22.21%	8.85%	8.40%	-15.50%	4.73%	25.42%	10.81%	-8.13%		
n	FPT Fountainhead Prop Trst																							
n	FSP Freestone Property Hldgs	21.32%	-1.21%	4.29%	-10.59%	-17.76%	-60.00%	52.00%	-6.58%	7.04%	15.79%	468.18%	-5.00%	10.53%	16.19%	5.74%	27.13%	-19.51%	11.36%	18.37%	10.34%			
n	GBL Genbel South Africa Ltd	12.69%	-2.91%																					
n	GMF Gencor Ltd	-4.26%	7.78%	-10.82%	-19.08%	-99.69%	18.18%	0.00%	-7.69%	8.33%	23.08%	6.25%	-11.76%	-6.67%	7.14%	26.67%	5.26%							
n	GMB Glenrand M.I.B. Ltd	1.89%	-9.26%	-11.02%	-1.38%	-7.44%	27.64%	27.95%	12.92%	-8.72%	0.30%	20.24%	-30.69%	-8.21%	-1.56%	-7.11%	-12.34%	-23.30%	-11.39%	12.86%	-5.70%	-6.71%		
n	GNK Grintek Ltd	-15.71%	-3.95%	10.59%	-40.43%	2.68%	4.35%	12.50%	-7.41%	0.00%	9.60%	27.01%	4.60%	8.79%										
n	GRF Group Five Ltd Ord	-2.86%	52.94%	45.19%	-24.50%	-8.77%	32.69%	39.86%	1.04%	12.82%	3.73%	32.78%	-4.62%	6.51%	29.95%	5.25%	44.42%	-5.43%	21.74%	30.00%	24.40%	-3.89%		
n	GRT Growthpoint Prop Ltd	447.06%	-2.58%	17.00%	8.49%	0.87%	-5.52%	12.77%	-6.15%	3.45%	3.33%	25.00%	6.45%	9.82%	10.38%	10.00%	23.18%	-20.96%	1.77%	13.30%	20.24%	0.00%		
n	HXT Hix Technologies Ltd																							
n	HCI Hosken Cons Invest Ltd	-4.76%	5.00%	9.52%	54.78%	-1.69%	0.00%	0.00%	0.00%	0.00%	201.43%	108.53%	31.82%	-0.34%	3.81%	25.00%	6.67%	5.00%	7.14%	31.11%	2.29%	31.71%</		



Share Price Changes

ownership	Alpha Code	Equity Name	2002				2003				2004				2005				2006				2007	
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
n	HWN	Howden Africa Hldgs Ltd	11.67%	-2.99%	26.15%	0.00%	-2.44%	56.25%	20.00%	-20.00%	5.00%	50.79%	15.79%	70.45%	6.93%	29.68%	-5.77%	19.39%	19.66%	-51.43%	17.65%	30.00%	23.08%	
n	HDC	Hudaco Industries Ltd	1.48%	18.61%	5.85%	-5.81%	-0.62%	14.91%	14.86%	13.88%	-4.96%	19.52%	18.95%	7.03%	5.71%	15.54%	-0.58%	12.94%	-10.42%	9.30%	29.79%	22.13%	14.09%	
n	HYP	Hyprop Investments Ltd	-6.31%	9.84%	8.49%	2.61%	7.63%	-5.91%	15.06%	1.82%	5.00%	12.24%	19.70%	10.89%	5.02%	16.52%	11.57%	23.75%	-21.62%	12.76%	17.74%	16.10%	-1.90%	
n	IFR	Ifour Properties Ltd	-13.72%	15.38%	14.44%	2.91%	0.94%	22.62%	-4.73%	-1.60%	8.94%	19.40%	17.50%	-3.19%	2.75%	18.18%			-23.97%	16.26%	0.42%	3.80%	5.69%	
n	ILA	Iliad Africa Ltd	3.64%	77.19%	24.75%	7.14%	11.11%	28.33%	42.86%	3.45%	5.45%	24.00%	37.10%	-4.90%	4.12%	3.96%	8.10%	20.26%	-23.08%	9.81%	12.75%	28.85%	17.01%	
n	IPL	Imperial Holdings Ltd	30.26%	-11.97%	12.59%	-9.27%	7.41%	6.34%	17.54%	0.00%	2.99%	18.12%	27.61%	-6.24%	4.91%	30.01%	5.71%	21.62%	-21.05%	-4.26%	26.88%	-7.62%	-3.76%	
n	INS	Insur Outsourcing Manager	-12.50%	-7.14%	-23.08%	-20.00%	125.00%	-5.56%	-5.88%	93.75%	-35.48%	-10.00%	22.22%	0.00%	-4.55%	0.00%	0.00%							
n	INH	Investec Holdings Ltd	26.16%	-11.76%																				
n	INL	Investec Ltd	22.31%	-23.68%	-6.88%	-32.30%	28.76%	-0.51%	30.61%	-1.88%	-1.27%	3.59%	40.91%	-1.66%	11.52%	20.03%	15.84%	13.41%	2.17%	-77.24%	20.52%	6.34%	-2.14%	
n	INP	Investec Plc			-10.30%	-32.76%	29.61%	-0.51%	30.92%	-1.17%	0.16%	1.58%	40.61%	-0.11%	14.51%	18.50%	12.31%	14.07%	6.35%	-77.22%	17.47%	4.86%	-2.27%	
n	SLU	Investment Solutions Hld	8.89%	15.31%	6.90%																			
n	IVT	Invicta Holdings Ltd	29.03%	12.50%	20.00%	1.85%	23.64%	-2.94%	12.12%	26.35%	9.09%	18.63%	15.70%	10.71%	6.45%	-1.82%	-10.80%	28.03%	-5.41%	16.00%	42.86%	-5.17%	3.45%	
n	IOT	Iota Financial Serv Ltd	-11.11%	68.75%	0.00%																			
n	IPR	Iprop Holdings Ltd	-22.00%	-8.33%	22.38%	54.29%	12.96%	3.44%																
n	IST	Ist Group Ltd	53.33%	-11.30%	22.55%	-16.00%	19.05%	12.00%	14.29%	12.50%	-8.33%	18.18%	1.54%											
n	JGS	Jigsaw Holdings Ltd	33.33%	-6.67%	-28.57%	25.00%	0.00%	-44.00%	0.00%	-14.29%	25.00%	6.67%	9.38%											
n	JNC	Johnnic Holdings Ltd	-4.55%	-27.24%	48.92%	-3.10%	-78.12%	25.91%	9.47%	22.56%	-10.43%	15.68%	28.77%	-59.54%	5.68%	21.08%	6.57%	-12.92%	-7.66%	2.59%	13.64%	1.78%	33.71%	
n	JSE	Jse Ltd																		89.91%	38.16%	35.14%	12.61%	
n	KAP	Kap International Hldgs	20.00%	-16.67%	0.00%	-30.00%	142.86%	-17.65%	614.29%	38.00%	8.70%	46.67%	36.36%	3.33%	12.90%	14.29%	-6.25%	10.67%	-10.84%	8.11%	10.00%	-12.50%	-7.53%	
n	KEL	Kelly Group Ltd																						
n	LAB	Labat Africa Ltd																	7.69%	64.29%	-4.35%	-27.27%	25.00%	
n	LGL	Liberty Group Ltd	3.70%	-6.96%	4.89%	-15.46%	9.52%	-7.51%	15.38%	-4.44%	-1.16%	13.73%	14.83%	-2.66%	-8.38%	8.25%	17.42%	17.88%	-19.10%	1.94%	13.09%	-0.86%	8.75%	
n	LBH	Liberty Holdings Ltd Ord	1.47%	-4.61%	3.45%	-16.67%	0.40%	-1.20%	13.71%	-4.18%	-1.18%	13.11%	16.69%	-2.38%	-10.49%	4.90%	17.03%	16.93%	-19.46%	3.65%	13.82%	-1.90%	7.28%	
n	LBT	Liberty International Plc	0.65%	-1.52%	-13.42%	-9.89%	9.86%	-5.72%	8.78%	11.63%	-3.58%	11.56%	9.84%	6.97%	2.35%	-2.17%	-4.42%	15.74%	13.88%	25.04%	6.93%	-6.87%	-8.24%	
n	LYS	Lyons Fin Solutions Hldg	-16.67%	-10.00%	-11.11%	-25.00%	-33.33%	25.00%	0.00%	-40.00%	0.00%													
n	MCU	M Cubed Hldgs Ltd	19.05%	-40.00%	-23.33%	-13.04%	25.00%	20.00%	23.33%	-13.51%	6.25%	8.82%	32.43%	-34.69%	46.88%	-6.38%	-11.36%	0.00%	-17.95%	-21.88%	-4.00%	-4.17%	-8.70%	
n	MTP	Martprop Property Fund																	-19.48%	-1.94%				
n	MAS	Masonite Africa Ltd Ord	0.00%	64.29%	4.87%	-8.79%	-8.64%	29.35%	0.77%	3.05%	-10.37%	3.31%	10.00%	38.18%	-17.11%	20.63%	-14.21%	47.24%	-22.92%	34.59%	0.40%	39.88%	8.66%	
n	MTL	Mercantile Bank Hldgs Ltd	-42.86%	12.50%	33.33%	-25.00%	22.22%	0.00%	54.55%	11.76%	-10.53%	5.88%	0.00%	116.67%	-15.38%	0.00%	9.09%	0.00%	-16.67%	-10.00%	-3.70%	26.92%	0.00%	
n	MPL	Mtboard Properties Ltd	-0.37%	-3.70%	5.77%	5.45%	1.72%	0.34%	9.00%	-0.31%	-7.41%	9.00%	21.41%	-4.28%	15.79%	2.27%	21.11%	30.28%	-23.24%					
n	MFL	Metrofile Holdings Ltd	-2.53%	-55.97%	-14.45%	-70.69%	-87.06%	-9.09%	-40.00%	0.00%	-33.33%	150.00%	0.00%	250.00%	5.71%	75.68%	44.62%	35.11%	56.69%	-21.11%	-16.56%	2.29%	37.31%	
n	MET	Metropolitan Hldgs Ltd	5.88%	-11.90%	9.91%	-14.75%	14.42%	-5.88%	22.32%	5.11%	1.39%	20.55%	23.86%	-5.05%	-2.22%	9.88%	6.56%	19.41%	-16.61%	3.81%	22.45%	-1.00%	0.07%	
n	MEL	Mettle Ltd	21.82%	-16.42%	-10.71%	-6.00%	6.38%																	
n	MCP	Micc Property Income Fnd								2.42%	-5.45%	8.65%	27.08%	18.38%	-6.47%	10.69%	-0.57%							
n	MYT	Monyetla Property Fund Ltd																						
n	MUR	Murray And Roberts H Ord	25.85%	16.76%	17.59%	-14.17%	1.83%	18.02%	4.58%	-5.84%	0.39%	-10.42%	18.53%	-0.95%	2.79%	40.36%	-0.25%	41.33%	-8.30%	25.98%	25.31%	39.55%	14.37%	
n	MAF	Mutual And Federal Ins	0.58%	-8.67%	-6.65%	-18.64%	23.75%	1.01%	14.00%	7.31%	15.80%	-12.94%	32.43%	-14.29%	9.52%	15.22%	16.98%	12.90%	-14.29%	-23.33%	26.09%	-5.34%	0.36%	
n	MVG	Mvelaphanda Group Ltd												-9.29%	0.79%	21.72%	3.98%	11.11%	-15.56%	11.84%	20.82%	8.96%	0.54%	
n	NPK	Nampak Ltd Ord	19.13%	-2.19%	5.60%	-18.73%	5.65%	1.23%	5.69%	1.92%	9.81%	-3.09%	10.99%	0.96%	-5.70%	6.64%	5.98%	-0.53%	8.96%	-0.27%	19.45%	2.16%	-1.40%	
n	NCX	National Chick Ltd	25.88%																					
n	NED	Nedbank Group Ltd	1.74%	-15.04%	11.77%	-20.79%	1.70%	-22.68%	-10.36%	3.01%	-3.44%	-3.57%	30.76%	-3.34%	-1.08%	23.94%	8.46%	28.45%	-12.03%	1.06%	16.90%	5.62%	-6.38%	
n	NIB	Nedcor Invest. Bank Hldg	44.19%	-14.81%	6.10%																			
n	NEI	Northern Eng Ind Afr Ltd																						
n	OML	Old Mutual Plc	-11.46%	-19.23%	4.33%	-20.41%	15.22%	-4.07%	5.00%	5.03%	-0.34%	13.99%	7.68%	10.07%	-7.24%	7.19%	14.70%	19.61%	0.84%	11.73%	-1.20%	-2.30%	1.67%	
n	PAP	Pangbourne Prop Ltd	3.09%	2.40%	15.23%	18.64%	-1.43%	0.72%	10.07%	0.92%	-6.74%	15.83%	4.92%	10.86%	6.19%	15.24%	6.15%	15.87%	-17.81%	5.42%	13.44%	9.06%	-5.43%	
n	PRA	Paramount Prop Fund Ltd	4.26%	-4.08%	-1.28%	-13.79%	-15.00%	-2.65%	8.76%	-5.83%	6.19%	18.06%	11.76%	6.32%	7.92%	10.09%	2.50%	23.58%	-7.89%	2.57%	21.87%			
n	PSC	Pasdec Resources Sa Ltd	0.00%	33.33%	-18.75%	-3.85%	-12.00%	0.00%	-9.09%	50.00%	-3.33%	3.45%	-10.00%	4.44%	-21.99%	-31.82%	-33.33%	-60.00%	0.00%	-30.00%	7.14%			
n	PNR	Pioneer Property Fund	0.00%																					
n	PPC	Pretoria Port Cemnt	19.59%	2.23%	30.51%	-12.57%	12.33%	13.53%	26.43%	-9.41%	20.00%	16.03%	57.46%	-22.39%	3.96%	26.55%	5.41%	36.59%	-12.29%	-5.34%	11.53%	21.65%	3.81%	
n	PRM	Prima Property Trust	0.00%	-4.41%	30.77%	-5.88%	0.00%	-1.25%	24.05%	-14.29%	8.33%	8.79%	16.16%	-5.22%	14.68%	13.60%	15.49%							
n	PMG	Primegro Properties Ltd	0.00%	-8.17%	17.97%	8.46%	2.84%																	
n	RAH	Real Africa Hldgs Ltd	14.29%	-15.91%	22.97%	-5.49%	-52.09%	16.99%	16.18%	-2.86%	4.78%	5.26%	26.67%	7.89%	14.63%	-8.51%	17.44%	13.07%	4.20%	-4.20%	-10.53%	22.55%	16.00%	
n	RAI	Real Africa Invest Ltd	-8.70%	1.19%																				
n	RDF	Redefine Income Fund Ltd	11.16%	0.42%	12.50%	6.30%	-3.83%	-13.04%	25.00%	-11.67%	-0.75%	8.37%	15.79%	-3.03%	26.56%	18.52%	19.79%	16.52%	-21.64%	1.90%	29.91%	7.19%	-0.67%	
n	RES	Resilient Prop Inc Fd Ltd				5.69%	18.55%	-3.76%	23.58%	-7.89%	3.57%	4.83%	29.61%	-0.51%	12.24%	16.36%	9.38%	36.43%	-15.18%	-1.23%	21.25%	16.03%	10.62%	
n	RLO	Reunert Ord	0.53%	-1.06%	6.18%	-12.41%	2.89%	-3.93%	27.49%	13.30%	-1.62%	14.81%	34.41%	-5.33%	3.27%	15.38%	24.35%	29.47%	-4.55%	4.83%	19.97%	-1.28%	-5.95%	
n	RMH	Rmb Holdings Ltd	11.55%	-12.38%	8.02%	-9.18%	14.52%	-0.94%	23.89%	14.08%	8.32%	16.35%	15.81%	-1.52%	3.83%	17.75%	6.49%	4.48%	-15.27%	9.31%	23.70%	7.75%	-8.70%	



**Share Price Changes**

ownership Alpha Code	Equity Name	2002				2003				2004				2005				2006				2007		
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	
n	RRM Rrm Investment Hldgs Ltd	400.00%	0.00%	0.00%																				
n	SAC Sa Corp Real Estate Fund	3.90%	1.88%	9.82%	9.50%	7.14%	1.43%	14.08%	-9.88%	0.46%	8.64%	12.97%	-0.74%	10.07%	10.17%	1.23%							23.53%	-7.14%
n	SAE Sa Eagle Insurance Co	2.14%	-11.47%	5.89%	-4.46%	-18.60%	15.44%	1.47%	28.05%	-4.76%	15.00%	28.70%	18.24%	-15.43%	-5.40%	32.13%	5.41%	-28.21%	14.29%	-2.19%	11.82%	9.14%		
n	SRB Sa Reserve Bank	-7.14%																						
n	SRL Sa Retail Properties Ltd	-1.36%	10.60%	1.04%	8.25%	2.86%	0.00%	5.56%	-0.88%	9.73%	-2.42%	23.97%	16.67%	-3.31%	11.11%	1.06%	2.63%	2.56%	3.00%	5.34%	12.90%			
n	SBO Saambou Holdings Ltd	0.00%	0.00%	0.00%	0.00%	-17.86%	0.00%	0.00%	0.00%	0.00%	-11.74%	0.00%	0.00%	0.00%	0.00%	0.00%								
n	SGG Sage Group Ltd	-18.57%	-42.98%	-40.00%	-21.03%	3.90%	25.00%	-12.50%	-2.86%	2.94%	-12.57%	14.38%	5.71%	-20.54%	2.04%									
n	SLM Sanlam Ltd	16.08%	-12.69%	1.33%	-20.00%	15.13%	9.00%	15.33%	4.55%	-4.35%	24.55%	18.61%	-6.62%	-3.29%	9.03%	18.67%	8.62%	-12.12%	17.93%	7.02%	9.29%	12.45%		
n	SNT Santam Ltd	-0.26%	-16.05%	1.10%	-6.98%	20.00%	12.67%	26.73%	-11.48%	5.82%	16.93%	26.11%	-2.75%	-4.42%	8.79%	12.12%	5.59%	-21.29%	12.86%	15.83%	16.63%	11.53%		
n	SYA Siyathenga Property Fund															18.92%	21.21%	-27.50%	23.28%	13.99%	-0.98%	5.33%		
n	SOH South Ocean Holdings Ltd																							8.33%
n	SPE Spearhead Prop Hldgs Ltd	11.03%	5.59%	8.24%	5.54%	26.16%	2.86%	10.32%	15.11%	-5.63%	8.61%	27.74%	2.63%	8.47%	14.07%	14.74%	9.76%	-16.42%	14.11%					
n	SBK Standard Bank Group Ltd	9.22%	-10.31%	5.05%	-9.95%	20.81%	-2.44%	22.44%	7.20%	2.38%	18.40%	29.25%	-4.44%	2.81%	8.28%	8.30%	11.86%	-9.20%	1.05%	21.45%	13.02%	-7.96%		
n	SYC Sycom Property Fund	5.23%	1.12%	8.11%	7.39%	2.65%	-1.86%	7.14%	-0.49%	1.28%	8.46%	21.52%	2.95%	2.51%	9.09%	9.62%	12.57%	-21.04%	6.58%	11.11%	15.00%	-4.83%		
n	TBE Thebe Financial Services	0.00%	0.00%	0.00%	0.00%	0.00%																		
n	TSC Tiscor Ltd	-66.67%	0.00%	0.00%	200.00%	-66.67%	0.00%	200.00%	-66.67%	0.00%	200.00%	-66.67%	400.00%	160.00%	23.08%									
n	VNF Venfin Ltd	-2.23%	-7.20%	8.44%	-13.69%	10.53%	1.49%	23.75%	-0.52%	-5.29%	8.65%	16.20%	9.56%	4.36%	17.77%	41.12%								
n	VKE Vukile Property Fund Ltd																							
n	WNH Winhold Ltd Ord	29.17%	35.48%	7.14%	4.44%	-4.26%	17.78%	69.81%	0.00%	16.67%	39.05%	30.14%	0.53%	-21.99%	-9.40%	0.74%	2.94%	-19.29%	15.04%	20.77%	19.75%	-8.51%		
n	WPH Women Investment Portfol	-60.00%	16.67%	33.57%	4.28%																			
n	WLO Wooltru Ltd Ord	-95.97%	-10.34%	-7.69%	12.50%	3.70%	10.71%	3.23%	-15.63%	-7.41%	4.00%	7.69%	17.86%	6.06%	25.71%	-52.27%	-4.76%	10.00%	-13.64%	5.26%	-20.00%	62.50%		
n	YBG Yabeng Inv Hldg Company	72.73%	-18.42%	0.00%																				
n	ZRR Zarara Energy Ltd	-2.86%	5.88%	38.89%	-8.00%	-93.48%	-33.33%	100.00%	0.00%	0.00%	0.00%													
n	ZED Zeder Investments Ltd																						11.11%	-0.37%
	quarterly growth	12.99%	-0.33%	8.32%	-4.52%	1.76%	2.79%	27.23%	1.40%	-0.23%	17.23%	28.85%	8.56%	8.50%	15.15%	5.75%	15.77%	-10.07%	4.70%	14.38%	10.25%	5.69%		
	annual growth			22.00%				27.07%				52.81%				43.44%				24.68%				
	cumulative growth 100	113	113	122	116	119	122	155	157	157	184	237	257	279	321	340	393	354	370	424	467	494		
	cumulative growth %	12.99%	12.63%	22.00%	16.48%	18.53%	21.84%	55.03%	57.20%	56.83%	83.86%	136.89%	157.17%	179.05%	221.31%	239.79%	293.38%	253.77%	270.40%	323.67%	367.09%	393.65%		

mean	median	std dev	variance	max	min	range
8.29%	8.32%	9.54%	0.00911	28.85%	-10.07%	38.91%

annual growth	2002	2003	2004	2005	2006
	22.00%	27.07%	52.81%	43.44%	24.68%





**Owner/Managed - Quarter by Quarter Share Price Changes**

ownership Alpha Code	Equity Name	2002			2003			2004			2005			2006			2007					
		2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2				
f	MSS Marshalls Ltd	0.96%	-4.76%	-20.00%	-12.50%	12.86%	-10.13%	3.52%	15.65%	-5.88%	15.63%	-5.41%	1.14%	41.81%	11.55%	1.79%	5.26%	16.67%	0.00%	7.14%	20.00%	13.33%
f	FGM MasterFridge Ltd	0.00%																				
f	MMG Micromega Holdings Ltd	-71.43%	-45.00%	109.09%	-47.83%	-8.33%	-27.27%	90.00%	31.58%	60.00%	16.88%	6.95%	67.50%	-34.33%	15.45%	16.54%	25.00%	-16.22%	29.03%	-7.50%	-5.41%	-5.71%
f	MOB Mobile Industries Ord	2.94%	-27.14%	13.73%	3.45%	16.67%	21.43%	5.88%	5.56%	4.21%	1.01%	24.00%	15.32%	15.38%	-4.24%	2.53%	17.90%	9.95%	-6.67%	12.24%	11.36%	8.16%
f	MTE Monteagle Societe Anonym	-13.04%	0.00%	5.71%	0.00%	-8.78%	14.81%	-6.45%	0.00%	4.83%	0.00%	-7.89%	0.00%	14.29%	-5.63%	-3.97%	24.14%	11.11%	-10.00%	0.00%	0.00%	-1.11%
f	NCA New Corpcapital Ltd																					
f	NRB Nrb Holdings Ltd Ord	0.00%																				
f	OCT Octodec Invest Ltd	0.00%	-1.60%	4.07%	17.19%	16.67%	2.86%	31.94%	-6.32%	7.87%	3.13%	31.31%	-4.62%	16.13%	19.44%	7.33%	26.76%	-18.80%	21.05%	17.22%	19.44%	14.91%
f	ORE Orion Real Estate Ltd																					
f	OZZ Ozz Ltd	23.68%	-6.38%	18.18%	3.85%	0.00%																
f	PGR Peregrine Holdings Ltd	0.00%	-0.87%	9.65%	-28.00%	-26.67%	21.21%	37.50%	11.36%	-8.98%	7.62%	33.33%	4.69%	27.16%	43.19%	4.92%	28.91%	-3.03%	16.88%	32.09%	19.84%	22.97%
f	POW Power Technologies Ord	32.53%																				
f	PMM Premium Properties Ltd	-13.51%	-1.25%	10.76%	5.71%	29.73%	4.17%	40.00%	-7.14%	8.00%	16.81%	17.07%	-6.46%	36.97%	26.50%	3.47%	24.22%	-15.00%	1.88%	25.87%	10.09%	16.67%
f	PMV Primeserv Group Ltd	86.67%	-25.00%	-4.76%	25.00%	-20.00%	10.00%	13.64%	12.00%	3.57%	-20.69%	-13.04%	25.00%	-16.00%	52.38%	0.00%	0.00%	-6.25%	23.33%	0.00%	59.46%	25.42%
f	PRO Proper Group Ltd	-77.27%	96.00%	-59.18%	0.00%	0.00%	0.00%	0.00%	-65.00%	28.57%	11.11%	0.00%	0.00%	0.00%	70.00%	17.65%						
f	PSG Psg Group Limited	26.58%	-4.00%	2.08%	-43.88%	30.91%	16.67%	-7.14%	1.28%	-21.52%	17.74%	91.78%	-6.43%	29.01%	45.56%	34.15%	42.42%	-14.89%	18.95%	13.49%	5.19%	0.39%
f	PGH Psg Invest Bank Hldgs Ltd	-20.00%	62.50%	3.08%	5.97%																	
f	PPE Purple Capital Ltd	340.00%	-45.45%	66.67%	-15.00%	-35.29%	9.09%	25.00%	-33.33%	-40.00%	16.67%	28.57%	55.56%	7.14%	-6.67%	714.29%	21.05%	-25.36%	-7.77%	36.84%	7.69%	34.29%
f	PPR Putprop Ltd	-4.82%	1.01%	0.25%	11.25%	-14.61%	9.21%	6.02%	0.00%	6.82%	0.00%	6.38%	24.00%	8.06%	-20.90%	9.43%	3.45%	-8.33%	8.91%	-16.36%	-2.20%	7.14%
f	QUY Quyn Holdings Ltd	150.00%	-40.00%	116.67%	-61.54%	140.00%	108.33%	-52.00%	50.00%	-44.44%	-30.00%	71.43%	-41.67%	71.43%	83.33%	13.64%	8.00%	62.96%	13.64%	80.00%	61.11%	48.28%
f	RPR Rand Leases Prop Ltd	20.35%	21.32%	-41.21%	-42.27%	12.50%	-19.05%	107.84%	5.66%													
f	RBX Raubex Group Ltd																					46.01%
f	RGL Regal Treasury Bank Hld	0.00%	0.00%	0.00%	0.00%	0.00%																
f	REM Remgro Ltd	10.16%	-4.87%	-6.24%	-16.88%	24.39%	-9.22%	21.51%	1.98%	-2.78%	10.95%	14.93%	-0.59%	12.15%	4.52%	10.96%	10.66%	0.01%	14.07%	15.59%	1.68%	4.36%
f	RNT Rentsure Holdings Ltd	-10.00%	-22.22%	-42.86%	-5.00%	5.26%	-35.00%	53.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%						
f	RHW Richway Retail Prop Ltd																					
f	SJL S And J Land Holdings	27.27%	-32.14%	89.47%	2.78%	35.14%	36.00%	-26.47%	0.00%	-20.00%	0.00%	0.00%	62.50%	6.15%	42.03%	-38.78%	75.00%	-24.76%	1.27%	0.00%	25.00%	-10.00%
f	SBL Sable Hlgs Ltd Ord	-15.09%	55.56%	-7.14%	-23.08%	0.00%	4.00%	4.81%	19.27%	0.00%	23.08%	50.00%	-4.17%	4.35%	29.17%	-6.45%	24.14%	16.67%	0.00%	42.86%	20.00%	5.56%
f	SBV Sabvest Ltd	-37.50%	-13.64%	5.26%	0.00%	50.00%	-25.00%	-11.11%	-20.00%	71.88%	-7.27%	-13.73%	59.09%	2.86%	-20.83%	8.77%	35.48%	25.00%	14.29%	0.00%	32.83%	12.92%
f	SMR Samrand Develop Hldgs Ltd	-20.00%	-37.50%	-20.00%	-25.00%	0.00%	-33.33%	50.00%														
f	SFN Sasfin Holdings Ltd	3.28%	-5.56%	-8.40%	-18.72%	-6.09%	32.21%	34.55%	48.65%	-2.73%	40.19%	46.67%	-14.55%	6.38%	42.05%	3.48%	20.75%	-9.86%	5.00%	7.14%	20.83%	10.57%
f	SKJ Sekunjalo Investments Ltd	55.56%	-28.57%	105.00%	-24.39%	61.29%	14.00%	22.81%	-14.29%	-3.33%	-10.34%	28.85%	10.45%	-12.16%	0.00%	10.77%	25.00%	-11.11%	-6.25%	18.67%	-12.36%	26.92%
f	STO Setpoint Technology Hldg	21.05%	-4.35%	22.73%	-14.81%	13.04%	-7.69%	29.17%	6.45%	-6.06%	12.90%	48.57%	-3.85%	20.00%	33.33%	5.00%	10.71%	5.38%	-8.16%	-30.00%	-4.76%	0.00%
f	SFA Shops For Africa Ltd	0.00%	-14.00%	-4.65%	1.46%	5.77%	-4.55%	29.05%	-4.06%	1.92%	-96.98%	0.00%	0.00%	0.00%	0.00%	0.00%						
f	SMH Sng Holdings Ltd	0.00%																				
f	SUM Spectrum Shipping Ltd	-44.44%	-20.00%	25.00%	0.00%	-30.00%	28.57%	22.22%	-36.36%	-14.29%	0.00%	50.00%	-44.44%	40.00%	71.43%	0.00%	-16.67%	90.00%	-36.84%	41.67%		
f	SLL Stella Vista Technol Ltd	11.11%	-30.00%	-28.57%	-60.00%	150.00%	20.00%	-16.67%	-60.00%	50.00%	0.00%	0.00%	133.33%	42.86%	20.00%	-8.33%	27.27%	7.14%	20.00%	-22.22%	-21.43%	45.45%
f	STA Stratcorp Ltd																					
f	SPG Super Group Ltd	27.27%	-18.57%	8.42%	-9.39%	21.43%	16.47%	17.42%	15.05%	0.00%	12.15%	6.67%	-18.75%	2.40%	8.92%	-7.76%	19.63%	-6.25%	-2.50%	-1.28%	15.15%	14.21%
f	TGN Tigon Ltd	-46.49%	-12.50%	-74.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%						
f	TPC Transpaco Ltd	-1.41%	121.43%	22.58%	31.58%	-8.00%	30.43%	33.33%	-11.25%	12.68%	17.50%	17.02%	1.82%	6.25%	-7.56%	-6.91%	-7.23%	-11.58%	19.05%	24.00%	14.52%	5.63%
f	TMT Trematon Capital Inv Ltd	-11.76%	-60.00%	22.22%	-13.64%	31.58%	68.00%	52.38%	9.38%	-14.29%	-26.67%	-18.18%	63.89%	25.42%	18.92%	30.68%	-12.17%	-0.99%	-10.00%	33.33%	12.50%	22.22%
f	TRE Trencor Ltd	0.00%	-25.29%	36.22%	-11.56%	11.11%	14.12%	5.15%	14.71%	2.14%	4.60%	16.08%	34.39%	1.85%	10.78%	-4.55%	19.05%	2.00%	4.31%	14.66%	11.31%	-1.03%
f	VLE Value Group Ltd	123.53%	-21.05%	73.33%	-23.08%	62.50%	46.15%	22.11%	16.38%	7.41%	1.38%	29.93%	-10.99%	5.88%	19.44%	22.79%	34.47%	-16.90%	5.08%	-3.23%	-6.00%	-11.35%
f	VLY Velocity Holdings Ltd	-1.64%	10.33%																			
f	VTL Venter Leisure And Comm	-37.50%	0.00%	360.00%	-56.52%	20.00%	-25.00%	33.33%	16.67%	42.86%	-5.00%	163.16%	-10.00%	0.00%	-13.33%	0.00%	-23.08%	-16.67%	100.00%	-30.00%	42.86%	-6.00%
f	VTR Vestacor Ltd	-8.70%	-2.86%	-11.76%	-8.89%	0.00%																
f	WBO Wilson Bayly Hlm-Ovc Ord	7.30%	15.65%	20.00%	-6.86%	5.26%	14.00%	42.11%	3.09%	13.77%	10.53%	26.19%	3.77%	8.36%	28.86%	14.58%	28.41%	-7.96%	22.88%	14.24%	20.26%	17.72%
f	ZPT Zaptronix Ltd	50.00%	-66.67%	0.00%	0.00%	0.00%	200.00%	33.33%	-25.00%	0.00%	0.00%	33.33%	225.00%	61.54%	71.43%	-72.22%	30.00%	-15.38%	-9.09%	-30.00%	-14.29%	33.33%
	quarterly growth	12.82%	-3.73%	13.97%	-7.38%	10.20%	13.45%	15.83%	10.79%	0.04%	6.06%	23.06%	11.57%	14.30%	19.30%	15.68%	18.88%	3.87%	7.47%	20.99%	13.38%	15.91%
	annual growth			23.78%				34.11%				44.67%				75.99%				60.56%		
	cumulative growth 100	113	109	124	115	126	143	166	184	184	195	240	268	306	365	423	502	522	561	679	769	892
	cumulative growth %	12.82%	8.61%	23.78%	14.64%	26.33%	43.32%	66.01%	83.92%	84.00%	95.16%	140.15%	167.93%	206.25%	265.34%	322.64%	402.45%	421.90%	460.87%	578.61%	669.43%	791.81%

mean	median	std dev	variance	max	min	range
11.26%	13.38%	7.88%	0.0062127	23.06%	-7.38%	30.44%

	2002	2003	2004	2005	2006
annual growth	23.78%	34.11%	44.67%	75.99%	60.56%

## **Appendix 4 – Returns due to dividends**









**Quarter Returns**

ownership Alpha Code	Equity Name	2002				2003				2004				2005				2006				2007	
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
n	PRA Paramount Prop Fund Ltd	4.47%	4.29%	5.19%	2.59%	3.00%	3.53%	3.93%	3.47%	3.69%	3.47%	3.18%	2.74%	2.57%	2.39%	2.58%	2.28%	2.11%	2.29%	2.09%			
n	PSC Pasdec Resources Sa Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
n	PNR Pioneer Property Fund	0.00%																					
n	PPC Pretoria Port Cemnt	0.21%	0.00%	1.28%	0.00%	0.20%	0.00%	1.06%	0.00%	0.17%	0.00%	1.16%	0.00%	0.12%	0.00%	0.56%	0.00%	0.08%	0.00%	0.54%	0.00%	0.08%	
n	PRM Prima Property Trust	0.00%	8.82%	0.00%	6.47%	0.00%	12.18%	4.05%	2.14%	5.27%	0.00%	6.57%	0.00%	5.96%	0.00%	2.82%							
n	PMG Primegro Properties Ltd	7.17%	0.00%	8.38%	0.00%	5.82%																	
n	RAH Real Africa Hldgs Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	21.28%	0.00%	0.00%	13.49%	15.46%	1.40%	0.00%	0.00%	
n	RAI Real Africa Invest Ltd	0.00%	0.00%																				
n	RDF Redefine Income Fund Ltd	4.19%	3.97%	3.96%	3.15%	2.96%	4.62%	0.00%	2.50%	6.13%	0.00%	5.79%	0.00%	2.81%	2.28%	4.29%	0.00%	1.58%	2.02%	4.30%	0.00%	1.64%	
n	RES Resilient Prop Inc Fd Ld				0.00%	0.00%	7.06%	0.00%	5.61%	0.00%	5.89%	0.00%	4.48%	0.00%	4.36%	0.00%	3.73%	0.00%	3.51%	0.00%	3.26%	0.00%	
n	RLO Reunert Ord	1.60%	0.00%	4.73%	0.00%	1.85%	0.00%	5.15%	0.00%	1.62%	0.00%	4.30%	0.00%	1.46%	0.00%	4.02%	0.00%	0.93%	3.08%	3.08%	0.00%	0.90%	
n	RMH Rmb Holdings Ltd	0.00%	2.79%	0.00%	1.74%	0.00%	3.49%	0.00%	1.95%	0.00%	3.22%	0.00%	1.93%	0.00%	2.34%	3.82%	1.81%	0.00%	2.55%	0.00%	1.84%	0.00%	
n	RRM Rrm Investment Hldgs Ltd	0.00%	0.00%	0.00%																			
n	SAC Sa Corp Real Estate Fund	0.00%	7.63%	0.00%	6.70%	0.00%	5.71%	0.00%	5.04%	0.00%	5.68%	0.00%	4.63%	0.00%	4.41%	0.00%					3.53%	0.00%	
n	SAE Sa Eagle Insurance Co	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
n	SRB Sa Reserve Bank	0.00%																					
n	SRL Sa Retail Properties Ltd	5.45%	0.00%	9.53%	0.00%	3.16%	0.00%	5.79%	0.00%	6.13%	0.00%	5.37%	0.00%	4.19%	0.00%	3.51%	0.00%	3.92%	0.00%	3.64%	0.00%		
n	SBO Saambou Holdings Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%							
n	SGG Sage Group Ltd	0.00%	4.39%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%								
n	SLM Sanlam Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
n	SNT Santam Ltd	0.00%	1.71%	0.00%	3.26%	0.00%	2.00%	0.00%	2.88%	0.00%	1.97%	0.00%	16.83%	0.00%	1.64%	0.00%	10.89%	0.00%	1.76%	0.00%	3.00%	0.00%	
n	SYA Siyathenga Property Fund															0.00%	3.03%	3.38%	0.00%	0.00%	3.37%	3.72%	
n	SOH South Ocean Holdings Ltd																					0.00%	
n	SPE Spearhead Prop Hldgs Ltd	0.00%	7.76%	0.00%	7.17%	0.00%	6.20%	0.00%	5.76%	0.00%	5.30%	0.00%	4.53%	0.00%	4.50%	0.00%	3.54%	0.00%	4.21%				
n	SBK Standard Bank Group Ltd	0.00%	1.06%	0.00%	2.99%	0.00%	1.27%	0.00%	2.79%	0.00%	1.17%	0.00%	2.75%	0.00%	1.89%	0.00%	1.91%	0.00%	1.87%	0.00%	1.86%	0.00%	
n	SYC Sycom Property Fund	0.00%	6.23%	0.00%	6.05%	2.77%	0.00%	5.51%	0.00%	5.38%	0.00%	4.85%	0.00%	4.07%	0.00%	3.52%	0.00%	3.20%	0.00%	3.67%	0.00%	3.15%	
n	TBE Thebe Financial Services	0.00%	0.00%	0.00%	7.14%	27.90%																	
n	TSC Tisec Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%								
n	VNF Venfin Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	1.49%	0.00%	0.00%	0.00%	1.63%	0.00%	0.00%	0.00%	1.74%	0.00%							
n	VKE Vukile Property Fund Ltd										0.00%	6.01%	0.00%	5.99%	0.00%	4.81%	0.00%	3.65%	0.00%	4.28%	0.00%	3.81%	
n	WNH Winhold Ltd Ord	0.00%	0.00%	5.24%	0.00%	0.00%	0.00%	6.60%	0.00%	0.00%	3.56%	0.00%	0.00%	0.00%	0.00%	5.19%	0.00%	0.00%	0.00%	5.38%	0.00%	0.00%	
n	WPH Women Investment Portfol	0.00%	0.00%	0.00%	0.00%																		
n	WLO Wooltru Ltd Ord	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	75.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
n	YBG Yabeng Inv Hldg Company	0.00%	0.00%	0.00%																			
n	ZRR Zarara Energy Ltd	0.00%	0.00%	0.00%	0.00%	123.91%	0.00%	0.00%	0.00%	0.00%	0.00%												
n	ZED Zeder Investments Ltd																				0.00%	0.74%	
	quarterly return annual growth	1.13%	1.92%	1.64%	1.82%	5.35%	2.58%	3.51%	2.45%	1.16%	3.27%	2.21%	1.75%	0.95%	2.61%	2.20%	2.07%	2.37%	1.85%	0.74%	1.34%	0.67%	
	cumulative growth 100	101	103	105	107	112	115	119	122	124	128	131	133	134	138	141	144	147	150	151	153	154	
	cumulative growth %	1.13%	3.06%	4.76%	6.66%	12.37%	15.27%	19.33%	22.25%	23.67%	27.71%	30.54%	32.82%	34.08%	37.59%	40.61%	43.52%	46.92%	49.64%	50.75%	52.77%	53.79%	

mean	median	std dev	variance	max	min	range
2.08%	1.92%	1.07%	0.00011	5.35%	0.67%	4.69%

annual growth	2002	2003	2004	2005	2006
	4.76%	13.91%	9.40%	7.72%	7.21%





**Owner Managed - Quarter by Quarter Returns**

ownership	Alpha Code	Equity Name	Owner Managed - Quarter by Quarter Returns																					
			2002		2003				2004				2005				2006				2007			
			2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	
f	MSS	Marshalls Ltd	0.00%	2.86%	0.00%	3.13%	0.00%	3.16%	0.00%	3.40%	0.00%	3.13%	0.00%	3.43%	0.00%	2.39%	0.00%	2.28%	0.00%	2.00%	0.00%	0.00%	5.07%	0.00%
f	FGM	Masterfridge Ltd	0.00%	0.00%																				
f	MMG	Micromega Holdings Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	MOB	Mobile Industries Ord	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.73%	0.00%	0.45%	0.00%	1.42%	0.00%	0.74%	0.00%	1.36%	0.00%	0.00%
f	MTE	Monteagle Societe Anonym	0.00%	0.00%	1.88%	0.00%	0.00%	0.00%	1.35%	0.00%	0.00%	0.00%	1.37%	0.00%	0.00%	0.00%	0.00%	1.74%	0.70%	0.00%	0.98%	0.00%	0.74%	0.00%
f	NCA	New Corpcapital Ltd														0.00%	0.00%	0.00%	54.55%	0.00%	0.00%	0.00%	0.00%	0.00%
f	NRB	Nrb Holdings Ltd Ord	0.00%	0.00%																				
f	OCT	Octodec Invest Ltd	9.20%	0.00%	8.54%	0.00%	7.73%	0.00%	6.75%	0.00%	6.52%	0.00%	6.26%	0.00%	5.10%	0.00%	4.20%	0.00%	3.63%	0.00%	4.02%	0.00%	3.35%	0.00%
f	ORE	Orion Real Estate Ltd							0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	OZZ	Ozz Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%																
f	PGR	Peregrine Holdings Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.04%	0.00%	0.00%	0.00%	3.58%	0.00%	0.00%	0.00%	3.64%	0.00%	0.00%	0.00%	3.04%	0.00%
f	POW	Power Technologies Ord	26.67%	0.00%																				
f	PMM	Premium Properties Ltd	7.84%	0.00%	8.23%	0.00%	8.86%	0.00%	6.44%	0.00%	0.00%	0.00%	10.83%	0.00%	6.12%	0.00%	3.60%	0.00%	3.30%	0.00%	3.89%	0.00%	3.23%	0.00%
f	PMV	Primeserv Group Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.33%	0.00%	1.35%	0.00%	0.00%
f	PRO	Proper Group Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	PSG	Psg Group Limited	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	29.15%	25.64%	0.00%	0.00%	2.74%	0.00%	5.34%	0.00%	1.63%	0.00%	2.02%	0.00%	1.09%	0.00%	2.25%	0.00%
f	PGH	Psg Invest Bank Hldgs Ltd	50.00%	0.00%	0.00%	6.24%	0.00%																	
f	PPE	Purple Capital Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	PPR	Putprop Ltd	0.00%	0.00%	7.52%	6.25%	0.00%	7.89%	0.00%	5.68%	0.00%	6.38%	0.00%	5.00%	0.00%	3.73%	0.00%	3.45%	0.00%	0.00%	3.34%	2.99%	0.00%	0.00%
f	QUY	Qyn Holdings Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	RPR	Rand Leases Prop Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	235.29%	0.00%	0.00%														
f	RBX	Raubex Group Ltd																						0.00%
f	RGL	Regal Treasury Bank Hld	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%																
f	REM	Remgro Ltd	3.70%	0.00%	1.33%	0.00%	3.11%	0.00%	1.74%	0.00%	5.33%	0.00%	1.41%	0.00%	2.11%	5.70%	1.21%	0.00%	4.65%	0.00%	0.99%	0.00%	1.55%	0.00%
f	RNT	Rentsure Holdings Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	RHW	Richway Retail Prop Ltd																						
f	SJL	S And J Land Holdings	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	29.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	SBL	Sable Hlds Ltd Ord	0.00%	4.44%	0.00%	0.00%	0.00%	2.00%	0.00%	0.00%	0.00%	5.38%	0.00%	0.00%	0.00%	4.17%	0.00%	0.00%	0.00%	2.38%	0.00%	0.00%	0.00%	0.00%
f	SBV	Sabvest Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.50%	0.00%	0.00%	0.00%	1.36%	0.00%	0.00%	0.00%	1.94%	0.00%	0.00%	3.38%	0.00%	1.67%	0.00%	0.00%
f	SMR	Samrand Develop Hldgs Ld	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%														
f	SFN	Sasfin Holdings Ltd	0.00%	10.00%	0.00%	0.00%	0.00%	7.93%	0.00%	0.00%	0.00%	8.79%	0.00%	1.86%	0.00%	4.45%	0.00%	2.11%	0.00%	3.09%	0.00%	2.03%	0.00%	0.00%
f	SKJ	Sekunjalo Investments Ld	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	STO	Setpoint Technology Hldg	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.17%	0.00%	0.00%	0.00%	4.29%	0.00%	0.00%	0.00%	2.50%	0.00%	1.08%	0.00%	0.00%	0.00%	0.00%	0.00%
f	SFA	Shops For Africa Ltd	0.00%	8.43%	7.07%	0.00%	7.32%	0.00%	8.05%	94.79%	0.00%	6.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	SMH	Smg Holdings Ltd	0.00%	0.00%																				
f	SUM	Spectrum Shipping Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	SLL	Stella Vista Technol Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	STA	Stratcorp Ltd																						
f	SPG	Super Group Ltd	4.55%	0.00%	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	2.99%	0.00%	0.00%	0.00%	3.56%	0.00%	0.00%	0.00%	0.00%	0.00%	3.33%	0.00%	0.00%	0.00%
f	TGN	Tigon Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	TPC	Transpaco Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	6.52%	0.00%	1.75%	0.00%	2.75%	0.00%	1.45%	0.00%	2.02%	0.00%	1.56%	0.00%	2.86%	0.00%	1.61%	0.00%	0.00%
f	TMT	Trematon Capital Inv Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	TRE	Trencor Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.83%	0.00%	0.50%	0.00%	1.43%	0.00%	0.78%	0.00%	1.21%	0.00%	0.00%
f	VLE	Value Group Ltd	0.00%	0.00%	0.00%	0.00%	7.50%	0.00%	0.00%	0.00%	2.96%	0.00%	0.00%	0.00%	2.94%	0.00%	0.00%	0.00%	1.97%	0.00%	0.00%	0.00%	0.00%	0.00%
f	VLY	Velocity Holdings Ltd	0.00%	0.00%	0.00%																			
f	VTL	Venter Leisure And Comm	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
f	VTR	Vestacor Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%																
f	WBO	Wilson Bayly Hlm-Ovc Ord	0.00%	3.27%	0.00%	1.37%	0.00%	2.80%	0.00%	1.05%	0.00%	1.79%	0.00%	0.79%	0.00%	1.41%	0.00%	0.61%	0.00%	1.04%	0.00%	0.49%	0.00%	0.00%
f	ZPT	Zaptronix Ltd	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
		quarterly return	1.53%	0.50%	0.67%	0.58%	1.09%	0.86%	4.63%	3.26%	0.57%	2.05%	1.76%	1.04%	0.68%	1.22%	0.49%	0.83%	1.42%	0.70%	0.56%	0.57%	0.54%	
		annual growth			2.72%				7.30%				7.84%				3.48%				3.55%			
		cumulative growth 100	102	102	103	103	104	105	110	114	114	117	119	120	121	122	123	124	126	127	127	128	129	
		cumulative growth %	1.53%	2.03%	2.72%	3.31%	4.44%	5.34%	10.21%	13.80%	14.45%	16.80%	18.86%	20.09%	20.91%	22.39%	22.99%	24.02%	25.77%	26.65%	27.36%	28.09%	28.78%	

mean	median	std dev	variance	max	min	range
1.22%	0.83%	1.03%	0.0001064	4.63%	0.49%	4.14%

annual growth	2002	2003	2004	2005	2006
	2.72%	7.30%	7.84%	3.48%	3.55%

## **Appendix 5 – Combined returns**



**Non-owner Managed - Quarter by Quarter Combined Returns**

ownership Alpha Code	Equity Name	2002			2003			2004			2005			2006			2007					
		1	2	3	1	2	3	1	2	3	4	1	2	3	4	1	2					
n	ASA Absa Group Limited	30.83%	-8.53%	8.42%	-6.96%	22.41%	-1.94%	24.38%	10.68%	11.71%	27.65%	18.19%	-0.78%	12.04%	13.72%	9.38%	16.19%	-13.53%	1.28%	25.73%	13.64%	-5.74%
n	ACP Acucap Properties Ltd	-4.00%	0.00%	8.86%	8.16%	11.53%	0.90%	31.04%	-8.21%	1.39%	13.82%	19.75%	4.67%	18.29%	20.42%	3.44%	18.26%	-15.87%	11.45%	13.63%	17.11%	1.35%
n	ADR Adcorp Hldgs Ltd Ord	5.49%	-36.77%	3.79%	16.98%	24.29%	2.41%	33.94%	22.88%	-1.31%	19.83%	3.94%	15.68%	-4.00%	27.50%	6.19%	18.96%	-20.91%	8.83%	29.03%	17.53%	8.82%
n	ABL African Bank Investments	15.04%	-12.50%	11.05%	2.48%	11.40%	16.94%	48.28%	26.59%	1.67%	10.08%	49.35%	-8.74%	15.09%	17.38%	20.00%	22.94%	-4.42%	-21.04%	34.84%	5.94%	1.82%
n	AHV African Harvest Ltd	38.46%	-16.67%	13.33%	8.82%	3.78%	0.00%															
n	AFI African Life Assurance	32.50%	-26.76%	33.89%	-8.09%	10.04%	6.77%	10.49%	2.61%	-13.03%	7.95%	32.46%	19.24%	0.84%	105.57%	-99.31%						
n	ALY Alacrity Financial Servi	-4.76%	40.00%	-28.57%	30.00%	-19.23%	42.86%	76.67%	-5.66%													
n	AFB Alexander Forbes Ltd	20.61%	-20.25%	10.71%	-25.81%	6.28%	-6.36%	14.08%	-13.19%	-0.10%	11.87%	-6.58%	7.04%	13.16%	11.24%	1.05%	3.10%	-2.34%	9.59%	-2.50%	6.22%	3.50%
n	GRY Allan Gray Property Trst	6.34%	3.21%	6.67%	16.25%	4.66%	-6.51%	10.26%	0.00%	-0.33%	15.00%	19.42%	2.18%	9.50%	8.89%	8.96%	23.40%	-28.89%	7.50%	18.22%	12.30%	
n	ALD Aludie Ltd	-42.86%	75.00%	42.86%	0.00%	0.00%	-70.00%	266.67%	-18.18%	-44.44%	20.00%											
n	AMB Amb Holdings Ltd	-5.38%	6.50%	-5.34%	4.31%	-0.83%	22.50%	3.40%														
n	APP Amb Private Equity Ptnrs	21.64%	-26.92%	40.53%	-13.85%	119.64%	-0.81%															
n	ABT Ambit Properties Ltd								2.63%	11.79%	11.35%	1.77%	15.26%	28.17%	6.63%	13.64%	-4.27%	-5.80%	27.88%	5.00%	-1.12%	
n	APA Apexhi Properties -A-	8.11%	1.56%	9.23%	7.68%	7.65%	0.71%	17.40%	-0.53%	3.70%	6.69%	18.08%	3.59%	9.05%	18.92%	8.85%	16.74%	-18.59%	27.26%	7.90%	7.92%	-7.59%
n	ALE Appleton Ltd	-11.11%	-34.13%	60.00%	0.00%	0.00%																
n	APK Astrapak Ltd	12.52%	-5.69%	43.40%	1.32%	8.23%	19.75%	50.52%	3.42%	-1.51%	8.22%	47.47%	-9.01%	5.92%	7.27%	14.41%	5.93%	-14.06%	14.68%	-1.16%	-0.74%	15.68%
n	AEG Aveng Ltd	14.29%	11.50%	15.61%	-16.00%	4.76%	0.00%	4.59%	-15.64%	-1.33%	18.11%	39.53%	-5.83%	9.29%	37.49%	7.40%	30.63%	-8.72%	29.98%	22.18%	36.90%	8.59%
n	BAW Barloworld Ltd	1.61%	-6.35%	3.05%	-21.88%	13.16%	5.58%	23.61%	-5.06%	0.08%	17.03%	36.28%	-5.93%	-5.00%	22.41%	-4.95%	20.15%	-8.89%	7.02%	26.64%	10.37%	8.84%
n	BSR Basil Read Hldgs Ltd	52.00%	-10.53%	2.94%	-40.00%	19.05%	8.00%	8.15%	102.05%	-34.88%	-52.86%	54.55%	-14.71%	22.99%	175.70%	15.25%	95.59%	10.53%	33.33%	28.57%	57.14%	25.64%
n	BIC Bicc Cafca Ltd			-10.00%	-16.67%	-20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.11%	-3.30%	-31.82%	5.00%	3.17%
n	BVT Bidvest Ltd Ord	10.05%	-5.00%	5.39%	-8.93%	7.77%	-0.77%	20.34%	6.27%	0.96%	23.04%	27.30%	-9.78%	2.68%	29.26%	0.27%	25.28%	-13.38%	16.86%	18.41%	4.61%	4.36%
n	BOE Boe Ltd Ord	37.60%	-0.29%																			
n	BDM Buildmax Ltd	-13.33%	53.85%	-15.00%	-17.65%	-28.57%	0.00%	60.00%	-37.50%	10.00%	72.73%	189.47%	-9.09%	122.00%	54.55%	-19.41%	35.04%	-26.76%	0.75%	-8.89%	6.50%	37.40%
n	CBD C B D Property Fund	0.00%																				
n	CPT Capital Alliance Hldg Ld	23.86%	-13.73%	14.20%	-6.17%	13.47%	-3.65%	16.84%	2.70%	13.33%	5.83%	40.55%	8.35%	0.87%								
n	CPL Capital Property Fund	6.67%	-3.40%	25.00%	9.99%	3.00%	3.28%	22.73%	-3.05%	8.60%	16.17%	27.27%	-0.11%	17.19%	11.07%	8.00%	22.22%	-19.61%	8.08%	12.71%	15.66%	8.41%
n	CPI Capitec Bank Hldgs Ltd	71.05%	34.33%	41.67%	-2.35%	73.91%	-1.25%	29.37%	17.42%	6.90%	53.23%	34.21%	12.16%	21.50%	25.81%	35.05%	8.82%	-8.06%	7.37%	18.42%	1.67%	8.03%
n	CEN Centrecity Property Fund	9.47%	0.73%	15.38%	9.89%	0.00%	0.00%	12.50%														
n	CLE Clientele Life Assurance	23.81%	20.90%	0.15%	-4.62%	4.84%	5.67%	12.00%	8.57%	6.91%	40.00%	34.94%	12.14%	-4.46%	37.33%	9.17%	20.73%	11.74%	4.30%	12.68%	22.28%	1.03%
n	CFC Commercial Fin Co Ltd	19.23%	17.48%	108.83%	-76.10%	13.27%	105.41%	1.77%														
n	CNC Concor Ltd Recon	25.00%	12.00%	6.32%	-10.40%	0.55%	4.40%	3.26%	-6.32%	-1.12%	-1.14%	84.52%	16.19%	19.38%	14.88%	11.82%	0.00%					
n	CNF Congella Federation Ltd	0.00%	2.66%	0.00%	3.96%	0.00%	0.00%	114.46%														
n	CSL Consol Ltd	2.93%	13.74%	-0.42%															-9.94%	22.53%	21.47%	
n	CRH Coronation Holdings Ltd	-2.83%	-10.91%	9.49%	-1.46%	6.93%	0.00%															
n	CPA Corpcapital Ltd	1.45%	-12.14%	27.64%	-25.48%	39.32%	6.75%	9.77%	-70.68%	-3.57%	11.11%	105.00%	-69.86%	50.00%	0.00%							
n	CRW Corwil Investments Ltd	15.00%	4.35%	4.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-8.00%	0.00%	0.00%	0.00%						
n	DEL Delta Electrical In	-4.81%	-3.96%	4.23%	-14.65%	-1.78%	7.69%	-9.00%	5.26%	-17.31%	-0.23%	7.19%	1.20%	26.47%	-1.88%	-7.89%	3.69%	13.96%	-10.91%	10.00%	-18.14%	-7.72%
n	DSY Discovery Holdings Ltd	-16.28%	13.89%	-9.76%	-14.86%	18.25%	20.81%	26.11%	10.57%	2.23%	14.58%	27.21%	9.09%	7.84%	-5.45%	12.50%	4.74%	-17.99%	12.29%	20.63%	7.66%	0.80%
n	DAW Distribution And Warehsg	20.00%	0.00%	33.33%	32.14%	24.32%	3.26%	83.16%	11.18%	26.98%	56.25%	48.53%	-5.45%	15.38%	15.83%	3.31%	30.50%	-7.61%	14.12%	31.03%	27.47%	7.75%
n	DIV Diversified Prop Fund Ld																					
n	DLV Dorbyl Ltd Ord																					
n	EMI Emira Property Fund								-1.02%	1.96%	4.67%	27.18%	7.27%	7.46%	17.35%	11.11%	24.16%	-21.37%	12.71%	8.15%	13.38%	2.09%
n	ENV Enviroserv Holdings Ltd	8.33%	26.15%	23.38%	2.63%	12.82%	13.18%	14.35%	32.84%	-15.00%	7.19%	18.10%	-5.91%	7.14%	18.67%	20.93%	15.38%	-8.33%	20.18%	14.06%	34.25%	26.94%
n	FBF Fbc Fidelity Bank Hldgs																					
n	FDS Fedsure Holdings Ltd	30.47%																				
n	FSR Firstrand Ltd	15.56%	-12.55%	12.54%	-9.44%	17.54%	-2.03%	22.19%	12.25%	3.77%	21.57%	10.15%	1.84%	4.05%	24.26%	8.85%	10.14%	-15.50%	6.75%	25.42%	12.59%	-8.13%
n	FPT Fountainhead Prop Trst																					
n	FSP Freestone Property Hldgs	21.32%	41.82%	4.29%	21.76%	-17.76%	-60.00%	85.70%	23.03%	7.04%	61.84%	468.18%	-0.30%	10.53%	21.81%	5.74%	31.40%	-19.51%	16.44%	18.37%	14.20%	
n	GBL Genbel South Africa Ltd	12.69%	-2.91%																			
n	GMF Gencor Ltd	-4.26%	7.78%	-10.82%	-19.08%	-99.69%	18.18%	0.00%	-7.69%	8.33%	23.08%	6.25%	-11.76%	-6.67%	7.14%	26.67%	5.26%					
n	GMB Glenrand M.L.B. Ltd	1.89%	-5.19%	-11.02%	3.21%	-7.44%	34.17%	27.95%	16.31%	-8.72%	4.48%	20.24%	-27.97%	-8.21%	0.00%	-7.11%	-3.83%	-23.30%	-11.39%	12.86%	-5.70%	-6.71%
n	GNK Grintek Ltd	-15.71%	-0.34%	10.59%	-38.83%	2.68%	6.09%	12.50%	-6.30%	0.00%	12.00%	27.01%	5.46%	8.79%								
n	GRF Group Five Ltd Ord	-2.86%	58.82%	45.19%	-22.65%	-8.77%	37.12%	39.86%	2.59%	12.82%	6.36%	32.78%	-3.50%	6.51%	32.03%	5.25%	45.37%	-5.43%	22.99%	30.00%	25.05%	-3.89%
n	GRT Growthpoint Prop Ltd	447.06%	3.96%	17.00%	14.53%	4.82%	-3.47%	12.77%	-0.73%	3.45%	9.25%	25.00%	11.03%	9.82%	14.54%	10.00%	26.74%	-20.96%	5.71%	16.06%	21.46%	0.00%
n	HXT Hix Technologies Ltd																					
n	HCI Hosken Cons Invest Ltd	-4.76%	5.00%	9.52%	54.78%	-1.69%	0.00%	0.00%	0.00%	0.00%	201.43%	117.54%	31.82%	-0.34%	3.81%	25.00%	6.67%	5.00%	7.14%	31.11%	2.29%	32.54%
n	HPA Hospitality Prop Fund A																					
n	HVN Howden Africa Hldgs Ltd	11.67%	-2.99%	26.15%	0.00%	-2.44%	60.00%	20.00%	14.67%	5.00%	53.97%	15.79%	73.18%	6.93%	30.67%	-5.77%	20.61%	60.85%	-51.43%	17.65%	30.00%	23.08%
n	HDC Hudaco Industries Ltd	1.48%	20.73%	5.85%	-1.40%	-0.62%	16.89%	14.86%	18.12%	-4.96%	21.04%	18.95%	9.88%	6.91%	15.54%	-0.58%	15.34%	-10.42%	10.47%	29.79%	24.43%	19.40%







**Non-owner Managed - Quarter by Quarter Combined Returns**

ownership Alpha Code	Equity Name	2002				2003				2004				2005				2006				2007	
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
n	SRL Sa Retail Properties Ltd	4.09%	10.60%	10.57%	8.25%	6.02%	0.00%	11.34%	-0.88%	15.87%	-2.42%	29.34%	16.67%	0.88%	11.11%	4.57%	2.63%	6.49%	3.00%	8.98%	12.90%		
n	SBO Saambou Holdings Ltd	0.00%	0.00%	0.00%	0.00%	-17.86%	0.00%	0.00%	0.00%	0.00%	-11.74%	0.00%	0.00%	0.00%	0.00%	0.00%							
n	SGG Sage Group Ltd	-18.57%	-38.60%	-40.00%	-21.03%	3.90%	25.00%	-12.50%	-2.86%	2.94%	-12.57%	14.38%	5.71%	-20.54%	2.04%								
n	SLM Sanlam Ltd	16.08%	-12.69%	1.33%	-20.00%	15.13%	9.00%	15.33%	4.55%	-4.35%	24.55%	18.61%	-6.62%	-3.29%	9.03%	18.67%	8.62%	-12.12%	17.93%	7.02%	9.29%	12.45%	
n	SNT Santam Ltd	-0.26%	-14.34%	1.10%	-3.72%	20.00%	14.67%	26.73%	-8.60%	5.82%	18.90%	26.11%	14.08%	-4.42%	10.42%	12.12%	16.48%	-21.29%	14.62%	15.83%	19.62%	11.53%	
n	SYA Siyathenga Property Fund															18.92%	24.24%	-24.13%	23.28%	13.99%	2.39%	9.05%	
n	SOH South Ocean Holdings Ltd																					8.33%	
n	SPE Spearhead Prop Hldgs Ltd	11.03%	13.35%	8.24%	12.72%	26.16%	9.06%	10.32%	20.86%	-5.63%	13.91%	27.74%	7.16%	8.47%	18.57%	14.74%	13.30%	-16.42%	18.32%				
n	SBK Standard Bank Group Ltd	9.22%	-9.25%	5.05%	-6.97%	20.81%	-1.17%	22.44%	9.99%	2.38%	19.57%	29.25%	-1.69%	2.81%	10.16%	8.30%	13.77%	-9.20%	2.92%	21.45%	14.88%	-7.96%	
n	SYC Sycom Property Fund	5.23%	7.35%	8.11%	13.44%	5.41%	-1.86%	12.65%	-0.49%	6.66%	8.46%	26.38%	2.95%	6.58%	9.09%	13.14%	12.57%	-17.84%	6.58%	14.78%	15.00%	-1.68%	
n	TBE Thebe Financial Services	0.00%	0.00%	0.00%	7.14%	27.90%																	
n	TSC Tisec Ltd	-66.67%	0.00%	0.00%	200.00%	-66.67%	0.00%	200.00%	-66.67%	0.00%	200.00%	-66.67%	400.00%	160.00%	23.08%								
n	VNF Venfin Ltd	-2.23%	-7.20%	8.44%	-13.69%	10.53%	2.98%	23.75%	-0.52%	-5.29%	10.29%	16.20%	9.56%	4.36%	19.51%	41.12%							
n	VKE Vukile Property Fund Ltd																					8.73%	
n	WNH Winhold Ltd Ord	29.17%	35.48%	12.38%	4.44%	-4.26%	17.78%	76.42%	0.00%	16.67%	39.05%	33.70%	0.53%	-21.99%	-9.40%	5.93%	2.94%	-19.29%	15.04%	26.15%	19.75%	-8.51%	
n	WPH Women Investment Portfol	-60.00%	16.67%	33.57%	4.28%																		
n	WLO Wooltru Ltd Ord	-95.97%	-10.34%	-7.69%	12.50%	3.70%	10.71%	3.23%	-15.63%	-7.41%	4.00%	7.69%	17.86%	6.06%	25.71%	22.73%	-4.76%	10.00%	-13.64%	5.26%	-20.00%	62.50%	
n	YBG Yabeng Inv Hldg Company	72.73%	-18.42%	0.00%																			
n	ZRR Zarara Energy Ltd	-2.86%	5.88%	38.89%	-8.00%	30.43%	-33.33%	100.00%	0.00%	0.00%	0.00%												
n	ZED Zeder Investments Ltd																					11.11%	0.37%
	quarterly growth	14.12%	1.59%	9.97%	-2.71%	7.12%	5.37%	30.75%	3.85%	0.93%	20.50%	31.06%	10.31%	9.45%	17.76%	7.95%	17.84%	-7.70%	6.55%	15.12%	11.59%	6.36%	
	annual growth			27.49%				43.59%				65.53%				53.49%				33.42%			
	cumulative growth 100	114	116	127	124	133	140	183	190	192	231	303	334	366	431	465	548	506	539	621	692	736	
	cumulative growth %	14.12%	15.94%	27.49%	24.04%	32.87%	40.01%	83.06%	90.11%	91.87%	131.21%	203.02%	234.27%	265.87%	330.85%	365.09%	448.07%	405.87%	439.01%	520.51%	592.43%	636.45%	

mean	median	std dev	variance	max	min	range
10.37%	9.45%	9.68%	0.0093692	31.06%	-7.70%	38.76%

	2002	2003	2004	2005	2006
annual growth	27.49%	43.59%	65.53%	53.49%	33.42%





**Owner Managed - Quarter by Quarter Combined Returns**

ownership	Alpha Code	Equity Name	2002		2003				2004				2005				2006				2007			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2				
f	MSS	Marshalls Ltd	0.96%	-1.90%	-20.00%	-9.38%	12.86%	-6.96%	3.52%	19.05%	-5.88%	18.75%	-5.41%	4.57%	41.81%	13.94%	1.79%	7.54%	16.67%	2.00%	7.14%	25.07%	13.33%	
f	FGM	MasterFridge Ltd	0.00%																					
f	MMG	Micromega Holdings Ltd	-71.43%	-45.00%	109.09%	-47.83%	-8.33%	-27.27%	90.00%	31.58%	60.00%	16.88%	6.95%	67.50%	-34.33%	15.45%	16.54%	25.00%	-16.22%	29.03%	-7.50%	-5.41%	-5.71%	
f	MOB	Mobile Industries Ord	2.94%	-27.14%	13.73%	3.45%	16.67%	21.43%	5.88%	5.56%	4.21%	1.01%	24.00%	16.05%	15.38%	-3.79%	2.53%	19.32%	9.95%	-5.93%	12.24%	12.73%	8.16%	
f	MTE	Monteagle Societe Anonym	-13.04%	0.00%	7.60%	0.00%	-8.78%	14.81%	-5.10%	0.00%	4.83%	0.00%	-6.52%	0.00%	14.29%	-5.63%	-3.97%	25.88%	11.81%	-10.00%	0.98%	0.00%	-0.38%	
f	NCA	New Corpcapital Ltd																						
f	NRB	Nrb Holdings Ltd Ord	0.00%																					
f	OCT	Octodec Invest Ltd	9.20%	-1.60%	12.60%	17.19%	24.40%	2.86%	38.69%	-6.32%	14.38%	3.13%	37.58%	-4.62%	21.23%	19.44%	11.52%	26.76%	-15.17%	21.05%	21.23%	19.44%	18.26%	
f	ORE	Orion Real Estate Ltd																						
f	OZZ	Ozz Ltd	23.68%	-6.38%	18.18%	3.85%	0.00%																	
f	PGR	Peregrine Holdings Ltd	0.00%	-0.87%	9.65%	-28.00%	-26.67%	21.21%	37.50%	11.36%	-6.94%	7.62%	33.33%	4.69%	30.75%	43.19%	4.92%	28.91%	0.61%	16.88%	32.09%	19.84%	26.01%	
f	POW	Power Technologies Ord	59.20%																					
f	PMM	Premium Properties Ltd	-5.68%	-1.25%	18.99%	5.71%	38.59%	4.17%	46.44%	-7.14%	8.00%	16.81%	27.90%	-6.46%	43.10%	26.50%	7.07%	24.22%	-11.70%	1.88%	29.76%	10.09%	19.90%	
f	PMV	Primeserv Group Ltd	86.67%	-25.00%	-4.76%	25.00%	-20.00%	12.50%	13.64%	12.00%	3.57%	-20.69%	-13.04%	25.00%	-16.00%	52.38%	0.00%	0.00%	0.00%	-6.25%	26.67%	0.00%	60.81%	25.42%
f	PRO	Proper Group Ltd	-77.27%	96.00%	-59.18%	0.00%	0.00%	0.00%	0.00%	-65.00%	28.57%	11.11%	0.00%	0.00%	0.00%	70.00%	17.65%							
f	PSG	Psg Group Limited	26.58%	-4.00%	2.08%	-43.88%	30.91%	16.67%	22.00%	26.92%	-21.52%	17.74%	94.52%	-6.43%	34.35%	45.56%	35.77%	42.42%	-12.87%	18.95%	14.59%	5.19%	2.64%	
f	PGH	Psg Invest Bank Hldgs Ltd	30.00%	62.50%	3.08%	12.21%																		
f	PPE	Purple Capital Ltd	340.00%	-45.45%	66.67%	-15.00%	-35.29%	9.09%	25.00%	-33.33%	-40.00%	16.67%	28.57%	55.56%	7.14%	-6.67%	714.29%	21.05%	-25.36%	-7.77%	36.84%	7.69%	34.29%	
f	PPR	Putprop Ltd	-4.82%	1.01%	7.77%	17.50%	-14.61%	17.11%	6.02%	5.68%	6.82%	6.38%	6.38%	29.00%	8.06%	-17.16%	9.43%	6.90%	-8.33%	8.91%	-13.02%	0.80%	7.14%	
f	QUY	Quyn Holdings Ltd	150.00%	-40.00%	116.67%	-61.54%	140.00%	108.33%	-52.00%	50.00%	-44.44%	-30.00%	71.43%	-41.67%	71.43%	83.33%	13.64%	8.00%	62.96%	13.64%	80.00%	61.11%	48.28%	
f	RPR	Rand Leases Prop Ltd	20.35%	21.32%	-41.21%	-42.27%	12.50%	-19.05%	343.14%	5.66%														
f	RBX	Raubex Group Ltd																					46.01%	
f	RGL	Regal Treasury Bank Hld	0.00%	0.00%	0.00%	0.00%	0.00%																	
f	REM	Remgro Ltd	13.86%	-4.87%	-4.91%	-16.88%	27.50%	-9.22%	23.25%	1.98%	8.11%	10.95%	16.35%	-0.59%	14.26%	10.22%	12.17%	10.66%	4.66%	14.07%	16.58%	1.68%	5.92%	
f	RNT	Rentsure Holdings Ltd	-10.00%	-22.22%	-42.86%	-5.00%	5.26%	-35.00%	53.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%							
f	RHW	Richway Retail Prop Ltd																						
f	SJL	S And J Land Holdings	27.27%	-32.14%	89.47%	2.78%	35.14%	36.00%	2.94%	0.00%	-20.00%	0.00%	0.00%	62.50%	6.15%	42.03%	-38.78%	75.00%	-24.76%	1.27%	0.00%	25.00%	-10.00%	
f	SBL	Sable Hldgs Ltd Ord	-15.00%	60.00%	-7.14%	-23.08%	0.00%	6.00%	4.81%	19.27%	0.00%	28.46%	50.00%	-4.17%	4.35%	33.33%	-6.45%	24.14%	16.67%	2.38%	42.86%	20.00%	5.56%	
f	SBV	Sabvest Ltd	37.50%	-13.64%	5.26%	0.00%	50.00%	-25.00%	-11.11%	-18.50%	71.88%	-7.27%	-13.73%	60.45%	2.86%	-20.83%	7.88%	37.42%	25.00%	14.67%	0.00%	34.50%	12.92%	
f	SMR	Samrand Develop Hldgs Ltd	-20.00%	-37.50%	-20.00%	-25.00%	0.00%	-33.33%	50.00%															
f	SFN	Sasfin Holdings Ltd	3.28%	4.44%	-8.40%	-18.72%	-6.09%	40.14%	34.55%	48.65%	-2.73%	48.97%	46.67%	-12.68%	6.38%	46.50%	3.48%	22.86%	-9.86%	8.09%	7.14%	22.86%	10.57%	
f	SKJ	Sekunjalo Investments Ltd	55.56%	-28.57%	105.00%	-24.39%	61.29%	14.00%	22.81%	-14.29%	-3.33%	-10.34%	28.85%	10.45%	-12.16%	0.00%	10.77%	25.00%	-11.11%	-6.25%	18.67%	-12.36%	26.92%	
f	STO	Setpoint Technology Hldg	21.05%	-4.35%	22.73%	-14.81%	13.04%	-7.69%	33.33%	6.45%	-6.06%	12.90%	52.86%	-3.85%	20.00%	33.33%	7.50%	10.71%	6.45%	-8.16%	-30.00%	-4.76%	0.00%	
f	SFA	Shops For Africa Ltd	0.00%	-5.57%	2.41%	1.46%	13.09%	-4.55%	37.10%	90.73%	1.92%	-90.37%	0.00%	0.00%	0.00%	0.00%	0.00%							
f	SMH	Sng Holdings Ltd	0.00%																					
f	SUM	Spectrum Shipping Ltd	-44.44%	-20.00%	25.00%	0.00%	-30.00%	28.57%	22.22%	-36.36%	-14.29%	0.00%	50.00%	-44.44%	40.00%	71.43%	0.00%	-16.67%	90.00%	-36.84%	41.67%			
f	SLL	Stella Vista Technol Ltd	11.11%	-30.00%	-28.57%	-60.00%	150.00%	20.00%	-16.67%	-60.00%	50.00%	0.00%	0.00%	133.33%	42.86%	20.00%	-8.33%	27.27%	7.14%	20.00%	-22.22%	-21.43%	45.45%	
f	STA	Stratcorp Ltd																						
f	SPG	Super Group Ltd	31.82%	-18.57%	8.42%	-9.39%	26.43%	16.47%	17.42%	15.05%	2.99%	12.15%	6.67%	-18.75%	5.96%	8.92%	-7.76%	19.63%	-6.25%	0.83%	-1.28%	15.15%	14.21%	
f	TGN	Tigon Ltd	-46.49%	-12.50%	-74.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%							
f	TPC	Transpaco Ltd	-1.41%	121.43%	22.58%	31.58%	-8.00%	36.96%	33.33%	-9.50%	12.68%	20.25%	17.02%	3.27%	6.25%	-5.55%	-6.91%	-5.66%	-11.58%	21.90%	24.00%	16.13%	5.63%	
f	TMT	Trematoin Capital Inv Ltd	-11.76%	-60.00%	22.22%	-13.64%	31.58%	68.00%	52.38%	9.38%	-14.29%	-26.67%	-18.18%	63.89%	25.42%	18.92%	30.68%	-12.17%	-10.00%	33.33%	12.50%	22.22%		
f	TRE	Trencor Ltd	0.00%	-25.29%	36.22%	-11.56%	11.11%	14.12%	5.15%	14.71%	2.14%	4.60%	16.08%	35.22%	1.85%	11.28%	-4.55%	20.48%	2.00%	5.10%	14.66%	12.52%	-1.03%	
f	VLE	Value Group Ltd	123.53%	-21.05%	73.33%	-23.08%	70.00%	46.15%	22.11%	16.38%	10.37%	1.38%	29.93%	-10.99%	8.82%	19.44%	22.79%	34.47%	-14.93%	5.08%	-3.23%	-6.00%	-11.35%	
f	VLY	Velocity Holdings Ltd	-1.64%	10.33%																				
f	VTL	Venter Leisure And Comm	-37.50%	0.00%	360.00%	-56.52%	20.00%	-25.00%	33.33%	16.67%	42.86%	-5.00%	163.16%	-10.00%	0.00%	-13.33%	0.00%	-23.08%	-16.67%	100.00%	-30.00%	42.86%	-6.00%	
f	VTR	Vestacor Ltd	-8.70%	-2.86%	-11.76%	-8.89%	0.00%																	
f	WBO	Wilson Bayly Hlm-Ovc Ord	7.30%	18.91%	20.00%	-5.49%	5.26%	16.80%	42.11%	4.14%	13.77%	12.32%	26.19%	4.57%	8.36%	30.27%	14.58%	29.02%	-7.96%	23.92%	14.24%	20.75%	17.72%	
f	ZPT	Zaptronix Ltd	50.00%	-66.67%	0.00%	0.00%	200.00%	33.33%	-25.00%	0.00%	0.00%	33.33%	225.00%	61.54%	71.43%	-72.22%	30.00%	-15.38%	-9.09%	-30.00%	-14.29%	33.33%		
		quarterly return	14.34%	-3.19%	14.66%	-6.81%	11.33%	14.34%	20.52%	12.86%	0.62%	8.15%	24.82%	12.62%	14.98%	20.52%	16.18%	19.79%	5.33%	8.16%	21.57%	13.96%	16.46%	
		annual growth			26.92%				42.98%				53.29%				81.31%				65.90%			
		cumulative growth 100	114	111	127	118	132	151	181	205	206	223	278	313	360	434	504	604	636	688	837	954	1111	
		cumulative growth %	14.34%	10.70%	26.92%	18.28%	31.68%	50.57%	81.47%	104.81%	106.08%	122.87%	178.18%	213.28%	260.22%	334.13%	404.36%	504.18%	536.37%	588.30%	736.74%	853.58%	1010.54%	

mean	median	std dev	variance	max	min	range
12.44%	14.34%	8.11%	0.0065769	24.82%	-6.81%	31.62%

annual growth	2002	2003	2004	2005	2006
	26.92%	42.98%	53.29%	81.31%	65.90%

## **Appendix 6 – Quarter ending share prices**



Alpha Code	Equity Name	Quar																					
		2002				2003				2004				2005				2006				2007	
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
ASA	Absa Group Limited	2530	3247	2970	3160	2940	3514	3446	4214	4664	5100	6510	7599	7540	8248	9380	10100	11600	10030	9950	12510	13951	13150
ACP	Acecap Properties Ltd	1000	960	960	980	1060	1110	1120	1400	1285	1230	1400	1605	1680	1910	2300	2300	2720	2200	2452	2695	3156	3100
ADR	Adcorp Hldgs Ltd Ord	910	960	607	630	700	870	881	1180	1450	1377	1650	1690	1875	1800	2260	2400	2750	2175	2325	3000	3400	3700
ABL	African Bank Investments	532	600	525	565	579	620	725	944	1195	1180	1299	1830	1670	1870	2125	2450	3012	2799	2210	2860	3030	2990
AHV	African Harvest Ltd	130	180	150	170	185	192	192															
AFI	African Life Assurance	1100	1420	1040	1360	1250	1330	1420	1530	1570	1320	1425	1845	2200	2155	2180	15						
ALY	Alacrity Financial Servi	21	20	28	20	26	21	30	53	50													
AFB	Alexander Forbes Ltd	1310	1580	1260	1395	1035	1100	1030	1175	1020	1019	1140	1065	1140	1290	1435	1450	1495	1460	1600	1560	1657	1715
GRV	Allan Gray Property Trst	205	218	225	240	279	292	273	301	301	300	345	412	421	461	502	547	675	480	516	610	685	
ALD	Aludie Ltd	7	4	7	10	10	10	3	11	9	5	6											
AMB	Amb Holdings Ltd	650	615	655	580	605	600	735	760														
APP	Amb Private Equity Ptnrs	1080	1300	950	1300	1120	1235	1225															
ABT	Ambit Properties Ltd									190	195	218	226	230	252	323	330	375	345	325	400	420	400
APA	Apexhi Properties -A-	592	640	650	710	739	770	750	855	825	830	860	990	1000	1065	1241	1325	1520	1210	1395	1475	1559	1409
ALE	Appleton Ltd	9	8	5	8	8	8																
APK	Astrapak Ltd	260	281	265	380	385	405	485	730	755	730	790	1165	1060	1100	1180	1350	1430	1199	1375	1359	1349	1530
AEG	Aveng Ltd	700	800	865	1000	840	880	850	889	750	740	860	1200	1130	1235	1675	1799	2350	2145	2750	3360	4600	4995
BAW	Barloworld Ltd	6200	6300	5900	6080	4750	5375	5675	7015	6660	6665	7800	10630	10000	9500	11629	11053	13280	12100	12950	16400	18100	19700
BSR	Basil Read Hldgs Ltd	125	190	170	175	105	125	135	146	215	140	66	102	87	107	295	340	665	735	980	1260	1950	2450
BIC	Bicc Cafca Ltd	80		100	90	75	60	60	60	60	60	60	60	60	90	90	90	90	91	88	60	63	65
BVT	Bidvest Ltd Ord	4180	4600	4270	4500	3990	4300	4155	5000	5200	5250	6300	8020	7080	7270	9225	9250	11400	9875	11300	13380	13799	14400
BOE	Boe Ltd Ord	250	344	343																			
BDM	Buildmax Ltd	15	13	20	17	14	10	10	16	10	11	19	55	50	110	170	137	185	134	135	123	131	180
CBD	C B D Property Fund	180	180																				
CPT	Capital Alliance Hldg Ld	880	1020	880	1005	943	986	950	1110	1140	1200	1270	1785	1834	1850								
CPL	Capital Property Fund	165	176	156	195	200	206	198	243	221	240	264	336	320	375	400	432	510	410	425	479	535	580
CPI	Capitec Bank Hldgs Ltd	95	134	180	255	230	400	395	511	580	620	950	1275	1400	1701	2140	2890	3100	2850	3040	3600	3600	3889
CEN	Centrecity Property Fund	190	208	195	225	233	8	8	1														
CLE	Clientele Life Assurance	1050	1300	1298	1300	1240	1300	1250	1400	1520	1625	2075	2800	3140	3000	3870	4225	5101	5700	5685	6406	7833	7914
CFC	Commercial Fin Co Ltd	2600	3100	3450	4100	980	1110	1130	1150														
CNC	Concor Ltd Rcon	700	875	950	1010	905	910	920	950	890	880	840	1550	1801	2150	2420	2706	2706					
CNF	Congella Federation Ltd	8150	8150	8300	8300	8300	8300	8300	8300														
CSL	Consol Ltd	1025	1055	1200	1195													1449	1305	1560	1895		
CRH	Coronation Holdings Ltd	5660	5500	4900	5125	5050	500	500															
CPA	Corpcapital Ltd	138	140	123	157	117	163	174	191	56	54	60	73	22	33	33							
CRW	Corwil Investments Ltd	200	230	240	250	250	250	250	250	250	250	250	230	230	230	230							
DEL	Delta Electrical In	5200	4950	4701	4900	4040	3968	4220	3840	3900	3225	3200	3430	3400	4300	4180	3250	1970	2245	2000	2200	1801	1662
DSY	Discovery Holdings Ltd	860	720	820	740	630	745	900	1135	1255	1283	1470	1870	2040	2200	2080	2340	2451	2010	2230	2690	2880	2903
DAW	Distribution And Warehsg	35	42	42	56	74	92	95	170	189	240	375	550	520	600	695	705	920	850	970	1256	1601	1725
DIV	Diversified Prop Fund Ld																600	740	715	700	770	930	1037
DLV	Dorbyl Ltd Ord																	1362	1400				
EMI	Emira Property Fund								520	510	520	515	655	670	720	810	900	1081	850	920	995	1088	1090
ENV	Enviroserv Holdings Ltd	120	130	154	190	195	220	237	271	360	306	315	372	350	375	430	520	600	550	640	730	980	1244
FBF	Fbc Fidelity Bank Hldgs																						
FDS	Fedsure Holdings Ltd	128	167																				
FSR	Firststrand Ltd	662	765	654	736	650	764	730	892	982	1019	1212	1335	1333	1387	1695	1845	2000	1690	1770	2220	2460	2260
FPT	Fountainhead Prop Trst																						650
FSP	Freestone Property Hldgs	136	165	163	170	152	125	50	76	71	76	88	500	475	525	610	645	820	660	735	870	960	
GBL	Genbel South Africa Ltd	1340	1510	1466																			
GMF	Gencor Ltd	4700	4500	4850	4325	3500	11	13	13	12	13	16	17	15	14	15	19	20					
GMB	Glenrand M.L.B. Ltd	265	270	245	218	215	199	254	325	367	335	336	404	280	257	253	235	206	158	140	158	149	139
GNK	Grintek Ltd	210	177	170	188	112	115	120	135	125	125	137	174	182	198								
GRF	Group Five Ltd Ord	350	340	520	755	570	520	690	965	975	1100	1141	1515	1445	1539	2000	2105	3040	2875	3500	4550	5660	5440
GRT	Growthpoint Prop Ltd	85	465	453	530	575	580	548	618	580	600	620	775	825	906	1000	1100	1355	1071	1090	1235	1485	1485
HXT	Hix Technologies Ltd																						
HCI	Hosken Cons Invest Ltd	210	200	210	230	356	350	350	350	350	350	1055	2200	2900	2890	3000	3750	4000	4200	4500	5900	6035	7949
HPA	Hospitality Prop Fund A																	1308	1100	1200	1281	1425	1421
HWN	Howden Africa Hldgs Ltd	60	67	65	82	82	80	125	150	120	126	190	220	375	401	520	490	585	700	340	400	520	640
HDC	Hudaco Industries Ltd	1350	1370	1625	1720	1620	1610	1850	2125	2420	2300	2749	3270	3500	3700	4275	4250	4800	4300	4700	6100	7450	8500
HYP	Hyprop Investments Ltd	1030	965	1060	1150	1180	1270	1195	1375	1400	1470	1650	1975	2190	2300	2680	2990	3700	2900	3270	3850	4470	4385
IFR	Ifour Properties Ltd	452	390	450	515	530	535	656	625	615	670	800	940	910	935	1105	1335	1335	1015	1180	1185	1230	1300
ILA	Iliad Africa Ltd	110	114	202	252	270	300	385	550	569	600	744	1020	970	1010	1050	1135	1365	1050	1153	1300	1675	1960
IPL	Imperial Holdings Ltd	4260	5549	4885	5500	4990	5360	5700	6700	6700	6900	8150	10400	9751	10230	13300	14060	17100	13500	12925	16399	15150	14580
INS	Insur Outsourcng Manager	16	14	13	10	8	18	17	16	31	20	18	22	22	21	21	21						
INH	Investec Holdings Ltd	10780	13600	12001																			
INL	Investec Ltd	13000	15900	12135	11300	7650	9850	9800	12800	12560	12400	12845	18100	17800	19850	23826	27600	31300	31980	7280	8774	9330	9130
INP	Investec Pic			12600	11302	7600	9850	9800	12830	12680	12700	12901	18140	18120	20750	24588	27615	31500	33500	7630	8963	9399	9186



Alpha Code	Equity Name	2002				2003				2004				2005				2006				2007			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2		
SLU	Investment Solutions Hld	450	490	565	604																				
IYT	Invicta Holdings Ltd	310	400	450	540	550	680	660	740	935	1020	1210	1400	1550	1650	1620	1445	1850	1750	2030	2900	2750	2845		
IOT	Iota Financial Serv Ltd	90	80	135	135																				
IPR	Iprop Holdings Ltd	400	312	286	350	540	610	631																	
IST	Ist Group Ltd	75	115	102	125	105	125	140	160	180	165	195	198												
JGS	Jigsaw Holdings Ltd	45	60	56	40	50	50	28	28	24	30	32	35												
JNC	Johnic Holdings Ltd	4400	4200	3056	4551	4410	965	1215	1330	1630	1460	1689	2175	880	930	1126	1200	1045	965	990	1125	1145	1531		
JSE	Jse Ltd																		2001	3800	5250	7095	7990		
KAP	Kap International Hldgs	10	12	10	10	7	17	14	100	138	150	220	300	310	350	400	375	415	370	400	440	385	356		
KEL	Kelly Group Ltd																						955		
LAB	Labat Africa Ltd																	13	14	23	22	16	20		
LGL	Liberty Group Ltd	5400	5600	5210	5465	4620	5060	4680	5400	5160	5100	5800	6660	6483	5940	6430	7550	8900	7200	7340	8301	8230	8950		
LBH	Liberty Holdings Ltd Ord	14980	15200	14500	15000	12500	12550	12400	14100	13510	13350	15100	17620	17200	15395	16150	18900	22100	17800	18450	21000	20600	22100		
LBT	Liberty International Plc	9180	9240	9100	7879	7100	7800	7354	8000	8930	8610	9605	10550	11285	11550	11299	10800	12500	14235	17800	19033	17725	16264		
LYS	Lyons Fin Solutions Hldg	12	10	9	8	6	4	5	5	3	3														
MCU	M Cubed Hldgs Ltd	42	50	30	23	20	25	30	37	32	34	37	49	32	47	44	39	39	32	25	24	23	21		
MTP	Martprop Property Fund																	385	310	304					
MAS	Masonic Africa Ltd Ord	700	700	1150	1206	1100	1005	1300	1310	1350	1210	1250	1375	1900	1575	1900	1630	2400	1850	2490	2500	3497	3800		
MTL	Mercantile Bank Hldgs Ltd	14	8	9	12	9	11	11	17	19	17	18	18	39	33	33	36	36	30	27	26	33	33		
MPL	Methboard Properties Ltd	271	270	260	275	290	295	296	325	324	300	327	397	380	440	450	545	710	545						
MFL	Metrofile Holdings Ltd	790	770	339	290	85	11	10	6	6	4	10	10	35	37	65	94	127	199	157	131	134	184		
MET	Metropolitan Hldgs Ltd	595	630	555	610	520	595	560	685	720	730	880	1090	1035	1012	1112	1185	1415	1180	1225	1500	1485	1486		
MEL	Mettle Ltd	55	67	56	50	47	50																		
MCP	Micc Property Income Fnd								537	550	520	565	718	850	795	880	875								
MYT	Monyetla Property Fund Ltd																						270		
MUR	Murray And Roberts H Ord	735	925	1080	1270	1090	1110	1310	1370	1290	1295	1160	1375	1362	1400	1965	1960	2770	2540	3200	4010	5596	6400		
MAF	Mutual And Federal Ins	1720	1730	1580	1475	1200	1485	1500	1710	1835	2125	1850	2450	2100	2300	2650	3100	3500	3000	2300	2900	2745	2755		
MVG	Mvelaphanda Group Ltd												700	635	640	779	810	900	760	850	1027	1119	1125		
NPK	Nampak Ltd Ord	1150	1370	1340	1415	1150	1215	1230	1300	1325	1455	1410	1565	1580	1490	1589	1684	1675	1825	1820	2174	2221	2190		
NCX	National Chick Ltd	170	214																						
NED	Nedbank Group Ltd	11500	11700	9940	11110	8800	8950	6920	6203	6390	6170	5950	7780	7520	7439	9220	10000	12845	11300	11420	13350	14100	13200		
NIB	Nedcor Invest. Bank Hldg	267	385	328	348																				
NEI	Northern Eng Ind Afr Ltd																								
OML	Old Mutual Plc	1615	1430	1155	1205	959	1105	1060	1113	1169	1165	1328	1430	1574	1460	1565	1795	2147	2165	2419	2390	2335	2374		
PAP	Pangbourne Prop Ltd	485	500	512	590	700	690	695	765	772	720	834	875	970	1030	1187	1260	1460	1200	1265	1435	1565	1480		
PRA	Paramount Prop Fund Ltd	470	490	470	464	400	340	331	360	339	360	425	475	505	545	600	615	760	700	718	875				
PSC	Pasdec Resources Sa Ltd	120	120	160	130	125	110	110	100	150	145	150	135	141	110	75	50	20	20	14	15				
PNR	Pioneer Property Fund	190	190																						
PPC	Pretoria Port Cement	6380	7630	7800	10180	8900	9997	11350	14350	13000	15600	18100	28500	22120	22995	29100	30675	41900	36749	34788	38800	47200	49000		
PRM	Prima Property Trust	68	68	65	85	80	80	79	98	84	91	99	115	109	125	142	164								
PMG	Primegro Properties Ltd	600	600	551	650	705	725																		
RAH	Real Africa Hldgs Ltd	385	440	370	455	430	206	241	280	272	285	300	380	410	470	430	505	571	595	570	510	625	725		
RAI	Real Africa Invest Ltd	460	420	425																					
RDF	Redefine Income Fund Ltd	215	239	240	270	287	276	240	300	265	263	285	330	320	405	480	575	670	525	535	695	745	740		
RES	Resilient Prop Inc Fd Ltd				510	539	639	615	760	700	725	760	985	980	1100	1280	1400	1910	1620	1600	1940	2251	2490		
RLO	Reunert Ord	1870	1880	1860	1975	1730	1780	1710	2180	2470	2430	2790	3750	3550	3666	4230	5260	6810	6500	6814	8175	8070	7590		
RMH	Rmb Holdings Ltd	970	1082	948	1024	930	1065	1055	1307	1491	1615	1879	2176	2143	2225	2620	2790	2915	2470	2700	3340	3599	3286		
RRM	Rrm Investment Hldgs Ltd	1	5	5	5																				
SAC	Sa Corp Real Estate Fund	154	160	163	179	196	210	213	243	219	220	239	270	268	295	325	329				340	420	390		
SAE	Sa Eagle Insurance Co	9400	9601	8500	9001	8600	7000	8081	8200	10500	10000	11500	14800	17500	14800	14001	18500	19500	14000	16000	15650	17500	19100		
SRB	Sa Reserve Bank	98	91																						
SRL	Sa Retail Properties Ltd	440	434	480	485	525	540	540	570	565	620	605	750	875	846	940	950	975	1000	1030	1085	1225			
SBO	Saambou Holdings Ltd	280	280	280	280	280	230	230	230	230	230	203	203	203	203	203	203								
SGG	Sage Group Ltd	700	570	325	195	154	160	200	175	170	175	153	175	185	147	150									
SLM	Sanlam Ltd	740	859	750	760	608	700	763	880	920	880	1096	1300	1214	1174	1280	1519	1650	1450	1710	1830	2000	2249		
SNT	Santam Ltd	3810	3800	3190	3225	3000	3600	4056	5140	4550	4815	5630	7100	6905	6600	7180	8050	8500	6690	7550	8745	10199	11375		
SYA	Siyathenga Property Fund																	555	660	800	580	715	815	807	850
SOH	South Ocean Holdings Ltd																						720	780	
SPE	Spearhead Prop Hldgs Ltd	725	805	850	920	971	1225	1260	1390	1600	1510	1640	2095	2150	2332	2660	3052	3350	2800	3195					
SBK	Standard Bank Group Ltd	2930	3200	2870	3015	2715	3280	3200	3918	4200	4300	5091	6580	6288	6465	7000	7581	8480	7700	7781	9450	10680	9830		
SYC	Sycom Property Fund	765	805	814	880	945	970	952	1020	1015	1028	1115	1355	1395	1430	1560	1710	1925	1520	1620	1800	2070	1970		
TBE	Thebe Financial Services	70	70	70	70	70	70																		
TSC	Tisc Ltd	3	1	1	1	3	1	1	3	1	1	3	1	5	13	16									
VNF	Venfin Ltd	1790	1750	1624	1761	1520	1680	1705	2110	2099	1988	2160	2510	2750	2870	3380	4770								
VKE	Vukile Property Fund Ltd																								
WNH	Winhold Ltd Ord	24	31	42	45	47	45	53	90	90	105	146	190	191	149	135	136	140	113	130	157	188	172		
WPH	Women Investment Portfol	300	120	140	187	195																			
WLO	Wooltru Ltd Ord	720	29	26	24	27	28	31	32	27	25	26	28	33	35	44	21	20	22	19	20	16	26		



Alpha Code	Equity Name	2002				2003				2004				2005				2006				2007			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2		
YBG	Yabeng Inv Hldg Company	22	38	31	31																				
ZRR	Zarara Energy Ltd	175	170	180	250	230	15	10	20	20	20	20													
ZED	Zeder Investments Ltd																						243	270	269



		2002				2003				2004				2005				2006				2007		
Alpha Code	Equity Name	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	4
ABO	Absolute Holdings Ltd																	3	2	2		1	2	4
AFT	Afrimat Ltd																					975	959	1034
AGI	Ag Industries Ltd	345	310	286	275	220	195	195	170	235	220	230	278	301	310	280	278	375	330	410	475	550	529	
ALX	Alex White Holdings Ltd	28	35	37	35	48	46	80	115	170	120	135	150	140	150	190	240	305						
ATN	Allied Electronics Corp	741	845	775	875	780	900	955	1100	1150	1250	1275	1660	1535	1710	2250	2350	2820	2460	2800	3530	4649	4970	
AER	Amalgamated Elec Corp Ltd															195	200	240	198	195	177	174	140	
AEC	Anbeeco Investment Hldgs	6	6	3	5	5	4	4	2	14	12	6	6	8	5	5	4	14	10	10	68	45	50	
AQL	Aquila Growth Ltd	130	150	138	162	160	165	164	200	252	290	43	11											
ARC	Arcay Group Ltd	50	50	31	18	25																		
ART	Argent Industrial Ltd	160	206	215	330	280	285	351	348	350	495	665	999	1021	1044	1200	1192	1445	1310	1485	1618	1780	2125	
ATS	Atlas Properties Ltd	660	690	670	675	755	830	855	1000	940	900	980	1160	1230	1245	1450	1430	1600	1399	1498	1650	1900	1930	
ASO	Austro Group Limited																					270	345	
BJM	Barnard Jacobs Mellet	305	280	265	240	250	211	205	210	280	220	215	290	260	280	395	425	525	499	489	560	590	560	
BEL	Bell Equipment Ltd	900	700	846	955	850	635	660	780	750	800	630	620	610	850	950	950	1075	1320	1640	2600	3300	4060	
BNT	Bonatl Property Hldgs	45	35	35	45	67	55	56	52													30	51	39
BCF	Bowler Metcalf Ltd	218	228	220	270	306	285	300	400	365	400	490	560	540	575	610	630	700	690	705	695	675	705	
BAT	Brait S.A.	860	1020	930	850	650	690	576	720	730	720	754	965	1170	1350	1840	1949	2500	2150	2125	2550	2920	3030	
BRT	Brimstone Investmnt Corp	32	42	54	58	62	64	100	137	130	96	105	155	201	200	260	380	600	600	652	725	790	850	
CDZ	Cadiz Holdings Ltd	155	165	165	155	160	150	179	235	245	245	225	339	320	325	420	421	454	390	418	490	520	470	
CLO	Calulo Property Fund Ltd									100	100	100	100	120	217	238	230	260	240	302	330	320		
CAE	Cape Empowerment Trust	10	7	4	6	12	9	9	9	15	10	16	16	40	30	55	66	65	75	87	148	184	250	
CRG	Cargo Carriers Ltd	105	160	215	240	270	235	246	305	320	395	500	500	450	540	525	750	925	1050	1070	1000	1200	1500	
CBS	Cbs Property Portfolio																751	882	760	785	942	1175	1185	
CMG	Cenmag Holdings Ltd	9	3	8																				
CRM	Ceramic Industries Ltd	6750	7000	7600	7720	6200	6700	6100	6150	6050	6800	7800	9100	10000	9950	12930	12200	14000	12200	13900	14350	15702	18800	
CAL	Chariot Land Ltd	4	3																					
CTL	Coastal Group Ltd	250	250																					
CMA	Command Holdings Ltd	10	11	10	11	9	10	5	5	4	8	16	9	10	26	33	15	13	25	22	44	55	43	
CND	Conduit Capital Ltd	30	25	9	7	5	6	7	10	10	12	10	11	16	32	50	85	115	110	110	165	155	230	
PFN	Consol Prop And Fin Ltd	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5							
CNL	Control Instruments Grp	50	62	86	96	86	80	115	170	165	210	220	310	355	350	491	550	560	470	460	600	560	615	
CML	Coronation Fund Mngrs Ltd					365	282	370	433	320	350	400	370	395	550	550	635	555	600	655	776	800		
CVS	Corvus Cap (Sa) Hldg Ltd	3	17	14	3	2	1	2	5	2	1	2	2	2	5	5	16	17	13	13				
CYD	Cycad Financial Hldgs Ltd	6	8	6	3	3	2	5	2	2	1													
DEC	Decillion Ltd	130	145	105	105	87	93	90	90	76	50	35	28	23	14		14	9	15	16	15	17	22	
DGC	Digicore Holdings Ltd	31	26	20	20	28	25	35	47	60	67	112	155	158	146	249	264	335	290	395	421	565	736	
ELR	Eib Group Ltd Ord	850	400	300	330	301	350	380	460	500	440	510	430	400	390	570	590	750	720	750	950	1290	1750	
ERM	Enterprise Risk Mngment	400	148	73	70	73	81	95	97	90	96	100	98	95	96	131	134	150	149	175	173	165	214	
EUR	Eureka Ind Ltd Ord	2500	2200	2000	1700	1710	1700	1400	1350	1200	1140	1125	1051	950	950	1800	3795	2800	3250	3290	3701	3950	3950	
EXL	Excellerate Hldgs Ltd	51	64	67	37	28	18	32	31	28	32	42	70	75	65	60	70	58	59	80	70	120	115	
FVT	Fairvest Property Hldgs	75	50	60	65	65	55	54	54	50	50	50	50	25	25	32	42	45	45	42	61	66	65	
GLE	Gold Edge Holdings Ltd	20	20	20	20	20	25	25																
GDC	Good Cape Ltd	30	29	20	33	8	12	6	1															
GND	Grindrod Ltd	600	540	610	700	655	631	855	1190	2090	2050	2760	3950	4400	4450	5620	1275	1339	1165	1410	1560	1700	2205	
IFA	Ifanet Ltd	5	1	1	1	1																		
ICT	Incentive Holdings Ltd	1	2	3	4	2	5	7	4	5	2	2	3	2	2	2	2							
IND	Independent Financial Se	107	100	105	95	76	115	80	105	100	85	40	40	26	33	31	19	26	75	70	70	27	30	
IDQ	Indequity Group Ltd	110	110	101	100	100	120	120	120	120	120	120	120	120	120	65	65	65	60	60	40	75	105	
ICC	Indus Credit Co Africa H																	5	10	11	16	18	14	
ITG	Integrear Ltd	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50			23	20	2	
JSC	Jasco Electronics Hldgs	70	90	138	168	149	115	90	93	84	88	126	180	200	250	240	222	256	265	290	245	278	380	
JDH	John Daniel Holdings Ltd																	1	1	1	1	1	2	
KIR	Kairos Industrial Hldgs	3	5	2	5	3	7	5	7	9	8	7	33	33	34	32	41	36	35	40	38	51	44	
KHO	Kirchmann-Hurry Prop Ltd																							
KTL	Kunene Technology Ltd	500	600																					
LNF	London Fin Inv Grp Plc	410	330	330	330	285	225	235	300	260	300	250	274	350	350	400	350	400	395	630	580	630	750	
MDN	Madison Prop Fund Mngrs																		431	480	700	830	899	
MKL	Makalani Holdings Ltd															9740	9700	10125	9500	9645	9700	9425	9575	9500
MSS	Marshalls Ltd	208	210	200	160	140	158	142	147	170	160	185	175	177	251	280	285	300	350	350	375	450	510	
FGM	Masterfridge Ltd	10	10																					
MMG	Micromega Holdings Ltd	350	100	55	115	60	55	40	76	100	160	187	200	335	220	254	296	370	310	400	370	350	330	
MOB	Mobile Industries Ord	68																						





		Qu																						
Alpha Code	Equity Name	2002				2003				2004				2005				2006				2007		
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	
MTE	Monteagle Societe Anonym	1610	1400	1400	1480	1480	1350	1550	1450	1450	1520	1520	1400	1400	1600	1510	1450	1800	2000	1800	1800	1800	1800	1780
NCA	New Corpcapital Ltd														33	33	23	22	22	11	11	10	11	
NRB	Nrb Holdings Ltd Ord	250	250																					
OCT	Octodec Invest Ltd	250	250	246	256	300	350	360	475	445	480	495	650	620	720	860	923	1170	950	1150	1348	1610	1850	
ORE	Orion Real Estate Ltd							103	80	50	20	50	20	20	20	20	13	25	25	25	25	41	57	
OZZ	Ozz Ltd	1900	2350	2200	2600	2700	2700																	
PGR	Peregrine Holdings Ltd	230	230	228	250	180	132	160	220	245	223	240	320	335	426	610	640	825	800	935	1235	1480	1820	
POW	Power Technologies Ord	375	497																					
PMM	Premium Properties Ltd	185	160	158	175	185	240	250	350	325	351	410	480	449	615	778	805	1000	850	866	1090	1200	1400	
PMV	Primeserv Group Ltd	15	28	21	20	25	20	22	25	28	29	23	20	25	21	32	32	32	30	37	37	59	74	
PRO	Proper Group Ltd	110	25	49	20	20	20	20	20	7	9	10	10	10	10	17	20							
PSG	Psg Group Limited	395	500	480	490	275	360	420	390	395	310	365	700	655	845	1230	1650	2350	2000	2379	2700	2840	2851	
PGH	Psg Invest Bank Hldgs Ld	50	40	65	67	71																		
PPE	Purple Capital Ltd	5	22	12	20	17	11	12	15	10	6	7	9	14	15	14	114	138	103	95	130	140	188	
PPR	Putprop Ltd	415	395	399	400	445	380	415	440	440	470	470	500	620	670	530	580	600	550	599	501	490	525	
QUY	Quyn Holdings Ltd	4	10	6	13	5	12	25	12	18	10	7	12	7	12	22	25	27	44	50	90	145	215	
RPR	Rand Leases Prop Ltd	113	136	165	97	56	63	51	106	112														
RBX	Raubex Group Ltd																					1815	2650	
RGL	Regal Treasury Bank Hld	85	85	85	85	85	85																	
REM	Remgro Ltd	6300	6940	6602	6190	5145	6400	5810	7060	7200	7400	8210	9436	9380	10520	10995	12200	13500	13501	15400	17801	18100	18890	
RNT	Rentsure Holdings Ltd	50	45	35	20	19	20	13	20	20	20	20	20	20	20	20	20							
RHW	Richway Retail Prop Ltd																							
SJL	S And J Land Holdings	22	28	19	36	37	50	68	50	50	40	40	40	65	69	98	60	105	79	80	80	100	90	
SBL	Sable Hldgs Ltd Ord	530	450	700	650	500	500	520	545	650	650	800	1200	1150	1200	1550	1450	1800	2100	2100	3000	3600	3800	
SBV	Sabvest Ltd	160	220	190	200	200	300	225	200	160	275	255	220	350	360	285	310	420	525	600	600	797	900	
SMR	Samrand Develop Hldgs Ld	10	8	5	4	3	3	2	3															
SFN	Sasfin Holdings Ltd	610	630	595	545	443	416	550	740	1100	1070	1500	2200	1880	2000	2841	2940	3550	3200	3360	3600	4350	4810	
SKJ	Sekunjalo Investments Ld	18	28	20	41	31	50	57	70	60	58	52	67	74	65	65	72	90	80	75	89	78	99	
STO	Setpoint Technology Hldg	19	23	22	27	23	26	24	31	33	31	35	52	50	60	80	84	93	98	90	63	60	60	
SFA	Shops For Africa Ltd	250	250	215	205	208	220	210	271	260	265	8	8	8	8	8	8							
SMH	Smg Holdings Ltd	45	45																					
SUM	Spectrum Shipping Ltd	18	10	8	10	10	7	9	11	7	6	6	9	5	7	12	12	10	19	12	17			
SLL	Stella Vista Technol Ltd	9	10	7	5	2	5	6	5	2	3	3	3	7	10	12	11	14	15	18	14	11	16	
STA	Stratcorp Ltd																	27	35	28	65	57	120	
SPG	Super Group Ltd	550	700	570	618	560	680	792	930	1070	1070	1200	1280	1040	1065	1160	1070	1280	1200	1170	1155	1330	1519	
TGN	Tigon Ltd	299	160	140	36	36	36	36	36	36	36	36	36	36	36	36	36							
TPC	Transpaco Ltd	71	70	155	190	250	230	300	400	355	400	470	550	560	595	550	512	475	420	500	620	710	750	
TMT	Trematon Capital Inv Ltd	51	45	18	22	19	25	42	64	70	60	44	36	59	74	88	115	101	100	90	120	135	165	
TRE	Treacor Ltd	850	850	635	865	765	850	970	1020	1170	1195	1250	1451	1950	1986	2200	2100	2500	2550	2660	3050	3395	3360	
VLE	Value Group Ltd	17	38	30	52	40	65	95	116	135	145	147	191	170	180	215	264	355	295	310	300	282	250	
VLV	Velocity Holdings Ltd	610	600	662																				
VTL	Venter Leisure And Comm	8	5	5	23	10	12	9	12	14	20	19	50	45	45	39	39	30	25	50	35	50	47	
VTR	Vestacor Ltd	115	105	102	90	82	82																	
WBO	Wilson Bayly Hlm-Ovc Ord	685	735	850	1020	950	1000	1140	1620	1670	1900	2100	2650	2750	2980	3840	4400	5650	5200	6390	7300	8779	10335	
ZPT	Zaptronix Ltd	2	3	1	1	1	1	3	4	3	3	3	4	13	21	36	10	13	11	10	7	6	8	

## **Appendix 7 – Quarterly dividend distributions**









		2002				2003				2004				2005				2006				2007	
Alpha Code	Equity Name	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
ABO	Absolute Holdings Ltd									0	0	0	0	0	0	0	0	0	0	0	0	0	0
AFT	Afrimat Ltd																						
AGI	Ag Industries Ltd			7.5				5				6.5				6.5				9			
ALX	Alex White Holdings Ltd			0		0		4		0		0		0		0							
ATN	Allied Electronics Corp		37		0		43				52				63					78			118
AER	Amalgamated Elec Corp Ltd																			6			6
AEC	Anbecco Investment Hldgs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AQL	Aquila Growth Ltd						20					215.6	35										
ARC	Arceay Group Ltd																						
ART	Argent Industrial Ltd						9		9		10		11			12	13			14	15		16
ATS	Atlas Properties Ltd		37.53		51.41		39.41		54.08		41.87		57.33		44.46		61.03		47.6		67.66		56.4
ASO	Austro Group Limited																						0
BJM	Barnard Jacobs Mellet		3.5		0		0		0		1.5		0		9		29		38.5	52.14	18.5		15
BEL	Bell Equipment Ltd	10		0		15		0		0		0		0		0		0		0		25	
BNT	Bonatla Property Hldgs		0		0	0	0			50	0	0				0	0			0	0		0
BCF	Bowler Metcalf Ltd	4.75		3.6		6.2		4.3		6.9		6.6		7.8		7.6		8.8		8		9.1	
BAT	Brait S.A.		35			25	112.05		112.53		20.52		21.47			68.42	51.51		67.81		59.4		73.94
BRT	Brimstone Investmnt Corp	0				4				8				10				12				16	
CDZ	Cadiz Holdings Ltd	10.25		0		11		0		12		32		17.5				20				20	
CLO	Calulo Property Fund Ltd														4								
CAE	Cape Empowerment Trust		0	0		0		0		0		0		0		0		0		0		0	
CRG	Cargo Carriers Ltd		7		3		2.5		3.5		10		5		10		7.5		22.5		9.5		9
CBS	Cbs Property Portfolio																		32		40		40
CMG	Cenmag Holdings Ltd		0					1	0		0		0		0		0		0				0
CRM	Ceramic Industries Ltd	38		67		47		73		47		88		70		400		90		180		140	
CAL	Chariot Land Ltd																						
CTL	Coastal Group Ltd																						
CMA	Command Holdings Ltd	0	0		0		0		0		0				0	0			0	0		0	
CND	Conduit Capital Ltd		0		0		0		0		0		0		0		0		0		0		0
PFN	Consol Prop And Fin Ltd																						
CNL	Control Instruments Grp	0		1		1		1.5		2		2.5		3		3		4		3.5			
CML	Coronation Fund Mngrs Ltd								12		0		25	25	0		36		0		53		20
CVS	Corvus Cap (Sa) Hldg Ltd											0			0				0		0		0
CYD	Cycad Financial Hldgs Ltd	0			0	0		0		0		0		0		0			0		0		0
DEC	Decillion Ltd	6		0		3		0		0	0		0		0		0		0		0		0
DGC	Digicore Holdings Ltd	0					2			0		8		2		4		4		6		5	
ELR	Elb Group Ltd Ord			15		10		20		10		20		5		5		5		10		10	
ERM	Enterprise Risk Mngment	125			0		0	0		0		0		0		0		0		0		0	
EUR	Eureka Ind Ltd Ord		0		0		0		0		0		0		0		0	1000		0		0	0
EXL	Excellerate Hldgs Ltd	0		0		0		0		0		0		0		0		0		0		0	0
FVT	Fairvest Property Hldgs		6.3		2.9			0			0		0			0				0		0	
GLE	Gold Edge Holdings Ltd																						
GDC	Good Cape Ltd																						
GND	Grindrod Ltd	4		2.8		5.2		3.6		8.4		10		25		20		32		28		38	
IFA	Ifanet Ltd																						
ICT	Incentive Holdings Ltd		0		0		0		0		0		0										
IND	Independent Financial Se	0.5		1		0.75		1.25			4			14		13.92				0			
IDQ	Indequity Group Ltd		0		0		0		0		0		0			0			0		0		0
ICC	Indus Credit Co Africa H										0				0				0		0		0
ITG	Integrear Ltd	0		0		0		0		0		0		0		0		0		27.46		0	0
JSC	Jasco Electronics Hldgs		0		5		6		0		0		0		6		0		9		0		13
JDH	John Daniel Holdings Ltd														0		0		0		0		0
KIR	Kairos Industrial Hldgs			0	0		0		0		0		0		0		0		0		0		0
KHO	Kirchmann-Hurry Prop Ltd																						
KTL	Kunene Technology Ltd																						
LNF	London Fin Inv Grp Plc			13.18				9.7				10.78				11.51					14.21		
MDN	Madison Prop Fund Mngrs																				0		39
MKL	Makalani Holdings Ltd																	401		299		446	
MSS	Marshalls Ltd	6		6		5		5		5		5		6		6		6.5		7		19	
FGM	Masterfridge Ltd	12.2																					
MMG	Micromega Holdings Ltd	20	0	0			0	0			0	0			0	0				0		0	
MOB	Mobile Industries Ord	0		0		0		0		0		0		0.9		0.75				2.3		1.55	3
MTE	Monteagle Societe Anonym				26.35				20.9				20.84					25.23	12.65		17.56		13.24
NCA	New Corpcapital Ltd																						0
NRB	Nrb Holdings Ltd Ord																			12			
OCT	Octodec Invest Ltd		23		21		23.2		24.3		29		31		31.6		36.1		42.5		46.2		54
ORE	Orion Real Estate Ltd								0				0				0			0			



## **Appendix 8 – Statistical analysis report for share price changes**



## Two-Sample Test Report

Page/Date/Time 1 27/10/2007 09:23:05 PM  
Database

### Descriptive Statistics Section

Variable	Count	Mean	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
NOM_p	21	8.294567E-02	9.544765E-02	2.082838E-02	3.949841E-02	0.1263929
OM_p	21	0.1125961	7.882037E-02	1.720002E-02	7.671751E-02	0.1484747

Note: T-alpha (NOM\_p) = 2.0860, T-alpha (OM\_p) = 2.0860

### Confidence-Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	40	-2.965045E-02	8.752973E-02	2.701226E-02	-8.424426E-02	2.494336E-02
Unequal	38.62	-2.965045E-02	0.1237857	2.701226E-02	-8.430514E-02	2.500424E-02

Note: T-alpha (Equal) = 2.0211, T-alpha (Unequal) = 2.0233

### Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-1.0977	0.278914	Accept Ho	0.188347	0.064034
Difference < 0	-1.0977	0.139457	Accept Ho	0.285786	0.102870
Difference > 0	-1.0977	0.860543	Accept Ho	0.003222	0.000352

Difference: (NOM\_p)-(OM\_p)

### Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-1.0977	0.279147	Accept Ho	0.188101	0.063838
Difference < 0	-1.0977	0.139574	Accept Ho	0.285561	0.102638
Difference > 0	-1.0977	0.860426	Accept Ho	0.003229	0.000354

Difference: (NOM\_p)-(OM\_p)

### Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (NOM_p)	0.9087	0.363526	Cannot reject normality
Kurtosis Normality (NOM_p)	0.6186	0.536199	Cannot reject normality
Omnibus Normality (NOM_p)	1.2083	0.546537	Cannot reject normality
Skewness Normality (OM_p)	-1.7924	0.073067	Cannot reject normality
Kurtosis Normality (OM_p)	0.7208	0.471020	Cannot reject normality
Omnibus Normality (OM_p)	3.7323	0.154716	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.4664	0.399318	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.7218	0.400624	Cannot reject equal variances

### Two-Sample Test Report

Page/Date/Time 2 27/10/2007 09:23:05 PM  
Database

#### Median Statistics

Variable	Count	Median	95% LCL of Median	95% UCL of Median
NOM_p	21	8.322915E-02	1.763453E-02	0.1438189
OM_p	21	0.1338412	7.465609E-02	0.1583216

#### Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

Variable	Mann Whitney U	W Sum Ranks	Mean of W	Std Dev of W
NOM_p	163	394	451.5	39.75236
OM_p	278	509	451.5	39.75236

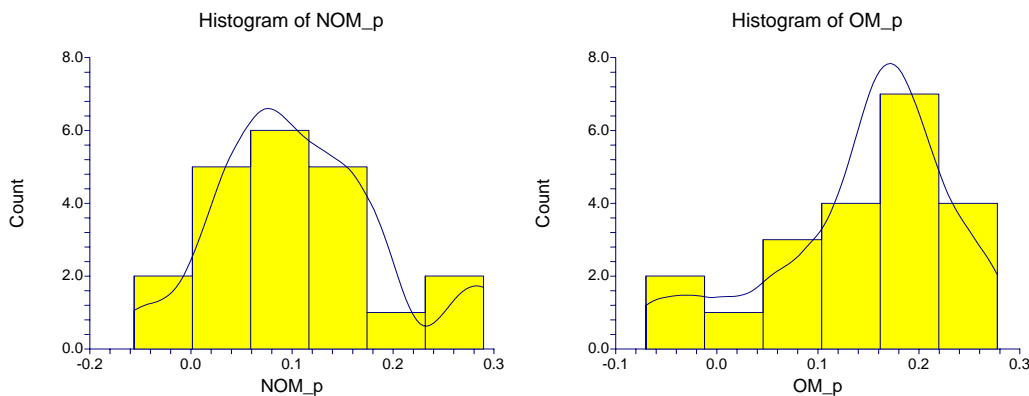
Number Sets of Ties = 0, Multiplicity Factor = 0

Alternative Hypothesis	Exact Probability		Approximation Without Correction		Approximation With Correction			
	Prob Level	Decision (5%)	Z-Value	Prob Level	Decision (5%)	Z-Value	Prob Level	Decision (5%)
Diff<>0			-1.4465	0.148050	Accept Ho	-1.4339	0.151607	Accept Ho
Diff<0			-1.4465	0.074025	Accept Ho	-1.4339	0.075804	Accept Ho
Diff>0			-1.4465	0.925975	Accept Ho	-1.4590	0.927722	Accept Ho

#### Kolmogorov-Smirnov Test For Different Distributions

Alternative Hypothesis	Dmn Criterion Value	Reject Ho if Greater Than	Test Alpha Level	Decision (Test Alpha)	Prob Level
D(1)<>D(2)	0.333333	0.4197	.050	Accept Ho	0.1963
D(1)<D(2)	0.333333	0.4197	.025	Accept Ho	
D(1)>D(2)	0.095238	0.4197	.025	Accept Ho	

#### Plots Section

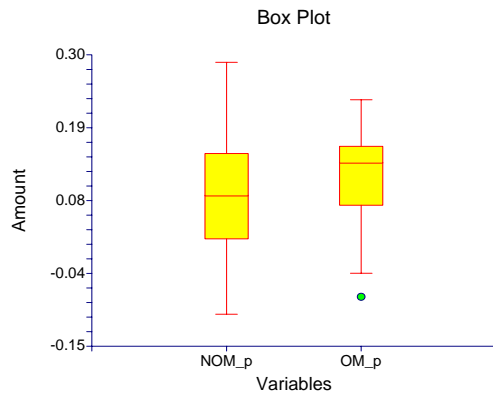
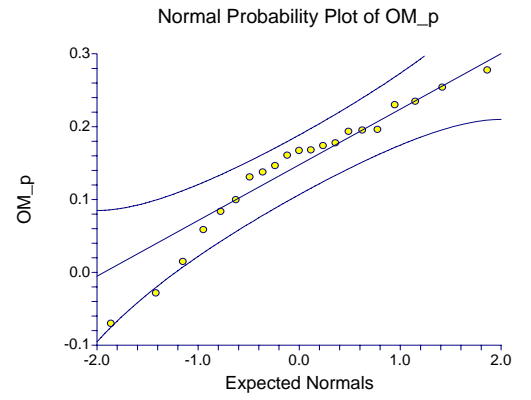
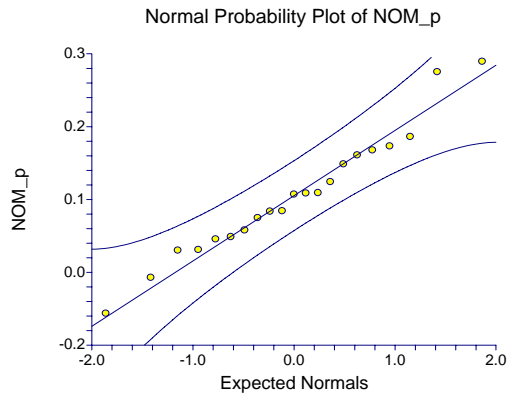




### Two-Sample Test Report

Page/Date/Time 3 27/10/2007 09:23:05 PM

Database



## **Appendix 9 - Statistical analysis report for dividend returns**

## Two-Sample Test Report

Page/Date/Time 1 27/10/2007 09:16:19 PM  
Database

### Descriptive Statistics Section

Variable	Count	Mean	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
NOM_d	21	2.076138E-02	0.0106771	2.329934E-03	1.590122E-02	2.562154E-02
OM_d	21	1.216813E-02	1.031329E-02	2.250544E-03	7.473576E-03	1.686268E-02

Note: T-alpha (NOM\_d) = 2.0860, T-alpha (OM\_d) = 2.0860

### Confidence-Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	40	8.59325E-03	1.049677E-02	3.239373E-03	2.046232E-03	1.514027E-02
Unequal	39.95	8.59325E-03	1.484467E-02	3.239373E-03	2.045987E-03	1.514051E-02

Note: T-alpha (Equal) = 2.0211, T-alpha (Unequal) = 2.0212

### Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	2.6528	0.011394	Reject Ho	0.735211	0.486868
Difference < 0	2.6528	0.994303	Accept Ho	0.000011	0.000000
Difference > 0	2.6528	0.005697	Reject Ho	0.832125	0.593457

Difference: (NOM\_d)-(OM\_d)

### Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	2.6528	0.011398	Reject Ho	0.735185	0.486816
Difference < 0	2.6528	0.994301	Accept Ho	0.000011	0.000000
Difference > 0	2.6528	0.005699	Reject Ho	0.832111	0.593415

Difference: (NOM\_d)-(OM\_d)

### Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (NOM_d)	2.6472	0.008115	Reject normality
Kurtosis Normality (NOM_d)	2.3507	0.018737	Reject normality
Omnibus Normality (NOM_d)	12.5338	0.001898	Reject normality
Skewness Normality (OM_d)	3.7746	0.000160	Reject normality
Kurtosis Normality (OM_d)	3.0474	0.002308	Reject normality
Omnibus Normality (OM_d)	23.5342	0.000008	Reject normality
Variance-Ratio Equal-Variance Test	1.0718	0.878319	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.2302	0.633996	Cannot reject equal variances

### Two-Sample Test Report

Page/Date/Time 2 27/10/2007 09:16:19 PM  
Database

#### Median Statistics

Variable	Count	Median	95% LCL of Median	95% UCL of Median
NOM_d	21	1.915602E-02	0.0134084	2.452421E-02
OM_d	31	8.33219E-03	5.716758E-03	1.416441E-02

#### Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

Variable	Mann Whitney U	W Sum Ranks	Mean of W	Std Dev of W
NOM_d	354	585	451.5	39.75236
OM_d	87	318	451.5	39.75236

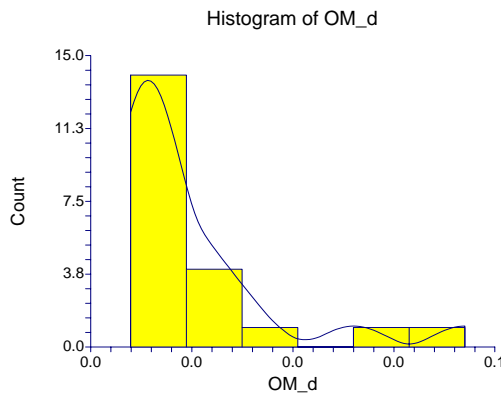
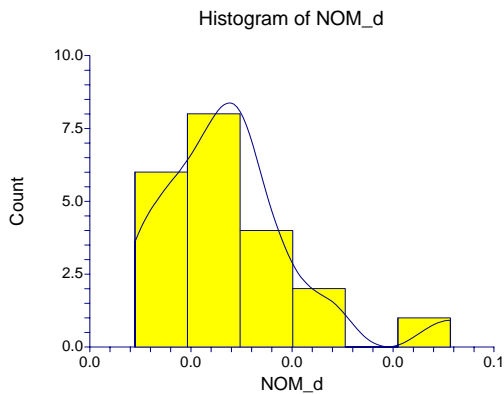
Number Sets of Ties = 0, Multiplicity Factor = 0

Alternative Hypothesis	Exact Probability		Approximation Without Correction		Approximation With Correction			
	Prob Level	Decision (5%)	Z-Value	Prob Level	Decision (5%)	Z-Value	Prob Level	Decision (5%)
Diff<>0			3.3583	0.000784	Reject Ho	3.3457	0.000821	Reject Ho
Diff<0			3.3583	0.999608	Accept Ho	3.3709	0.999625	Accept Ho
Diff>0			3.3583	0.000392	Reject Ho	3.3457	0.000410	Reject Ho

#### Kolmogorov-Smirnov Test For Different Distributions

Alternative Hypothesis	Dmn Criterion Value	Reject Ho if Greater Than	Test Alpha Level	Decision (Test Alpha)	Prob Level
D(1)<>D(2)	0.523810	0.4197	.050	Reject Ho	0.0055
D(1)<D(2)	0.000000	0.4197	.025	Accept Ho	
D(1)>D(2)	0.523810	0.4197	.025	Reject Ho	

#### Plots Section

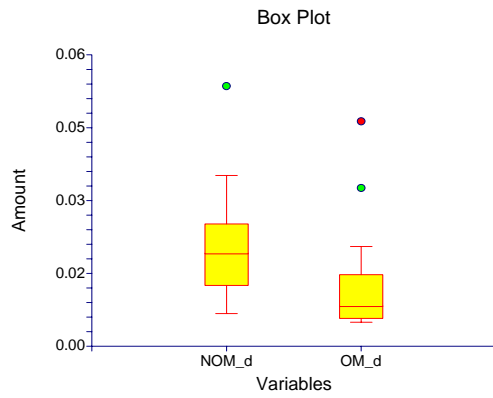
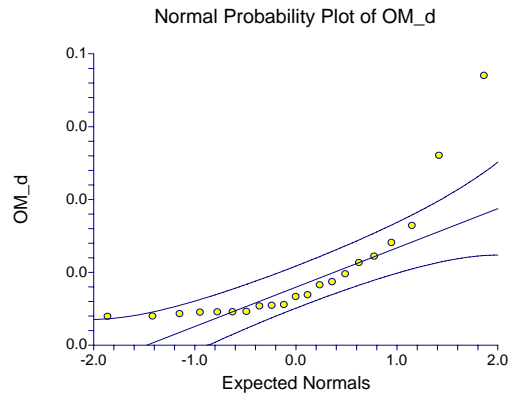
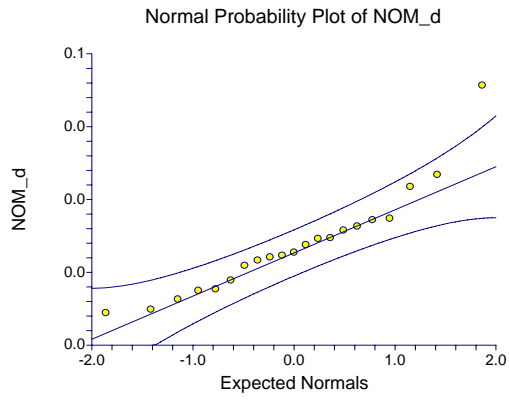




### Two-Sample Test Report

Page/Date/Time 3 27/10/2007 09:16:19 PM

Database



## **Appendix 10 - Statistical analysis report for combined returns**



## Two-Sample Test Report

Page/Date/Time 1 27/10/2007 09:25:46 PM  
Database

### Descriptive Statistics Section

Variable	Count	Mean	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
NOM_c	21	0.103707	9.679479E-02	2.112236E-02	5.964658E-02	0.1477675
OM_c	21	0.1243861	8.109799E-02	1.769703E-02	0.0874707	0.1613014

Note: T-alpha (NOM\_c) = 2.0860, T-alpha (OM\_c) = 2.0860

### Confidence-Limits of Difference Section

Variance Assumption	DF	Mean Difference	Standard Deviation	Standard Error	95% LCL of Mean	95% UCL of Mean
Equal	40	-2.067902E-02	8.929198E-02	0.0275561	-7.637199E-02	3.501394E-02
Unequal	38.81	-2.067902E-02	0.1262779	0.0275561	-7.642523E-02	3.506719E-02

Note: T-alpha (Equal) = 2.0211, T-alpha (Unequal) = 2.0230

### Equal-Variance T-Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-0.7504	0.457386	Accept Ho	0.113379	0.032226
Difference < 0	-0.7504	0.228693	Accept Ho	0.182184	0.054698
Difference > 0	-0.7504	0.771307	Accept Ho	0.008592	0.001136

Difference: (NOM\_c)-(OM\_c)

### Aspin-Welch Unequal-Variance Test Section

Alternative Hypothesis	T-Value	Prob Level	Decision (5%)	Power (Alpha=.05)	Power (Alpha=.01)
Difference <> 0	-0.7504	0.457519	Accept Ho	0.113282	0.032162
Difference < 0	-0.7504	0.228760	Accept Ho	0.182082	0.054615
Difference > 0	-0.7504	0.771240	Accept Ho	0.008600	0.001139

Difference: (NOM\_c)-(OM\_c)

### Tests of Assumptions Section

Assumption	Value	Probability	Decision(5%)
Skewness Normality (NOM_c)	1.1473	0.251258	Cannot reject normality
Kurtosis Normality (NOM_c)	0.7633	0.445313	Cannot reject normality
Omnibus Normality (NOM_c)	1.8989	0.386963	Cannot reject normality
Skewness Normality (OM_c)	-1.8199	0.068779	Cannot reject normality
Kurtosis Normality (OM_c)	0.8025	0.422274	Cannot reject normality
Omnibus Normality (OM_c)	3.9559	0.138353	Cannot reject normality
Variance-Ratio Equal-Variance Test	1.4246	0.435713	Cannot reject equal variances
Modified-Levene Equal-Variance Test	0.5230	0.473752	Cannot reject equal variances

### Two-Sample Test Report

Page/Date/Time 2 27/10/2007 09:25:46 PM  
Database

#### Median Statistics

Variable	Count	Median	95% LCL of Median	95% UCL of Median
NOM_c	21	9.454399E-02	5.374835E-02	0.1512209
OM_c	21	0.1434343	8.161769E-02	0.1646004

#### Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

Variable	Mann Whitney U	W Sum Ranks	Mean of W	Std Dev of W
NOM_c	171	402	451.5	39.75236
OM_c	270	501	451.5	39.75236

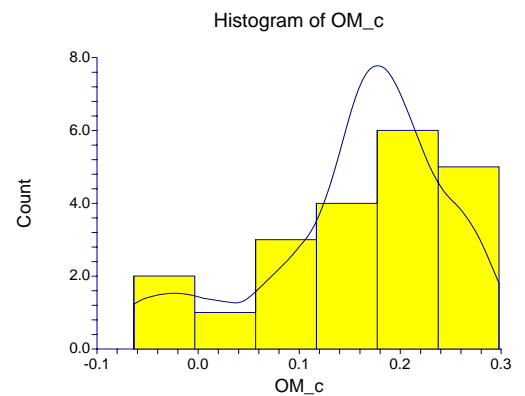
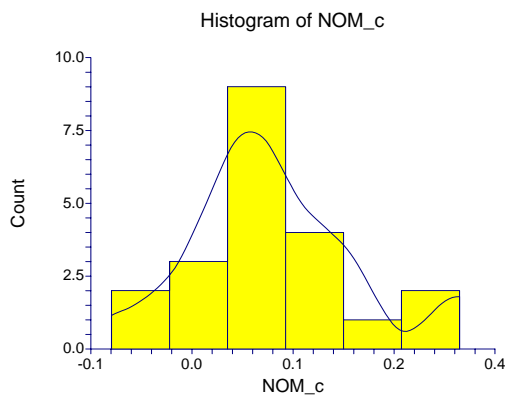
Number Sets of Ties = 0, Multiplicity Factor = 0

Alternative Hypothesis	Exact Probability		Approximation Without Correction		Approximation With Correction			
	Prob Level	Decision (5%)	Z-Value	Prob Level	Decision (5%)	Z-Value	Prob Level	Decision (5%)
Diff<>0			-1.2452	0.213055	Accept Ho	-1.2326	0.217713	Accept Ho
Diff<0			-1.2452	0.106527	Accept Ho	-1.2326	0.108857	Accept Ho
Diff>0			-1.2452	0.893473	Accept Ho	-1.2578	0.895766	Accept Ho

#### Kolmogorov-Smirnov Test For Different Distributions

Alternative Hypothesis	Dmn Criterion Value	Reject Ho if Greater Than	Test Alpha Level	Decision (Test Alpha)	Prob Level
D(1)<>D(2)	0.333333	0.4197	.050	Accept Ho	0.1963
D(1)<D(2)	0.333333	0.4197	.025	Accept Ho	
D(1)>D(2)	0.095238	0.4197	.025	Accept Ho	

#### Plots Section





### Two-Sample Test Report

Page/Date/Time 3 27/10/2007 09:25:46 PM

Database

