

**Evaluation of the impact of brand equity on shareholder returns
amongst South African companies**

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

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ABSTRACT

The research aimed at broadly exploring whether there is a relationship between brand equity and shareholder returns amongst South African companies. More specifically, the research sought to establish whether there was a correlation between strong brand equity, represented by the Markinor brand relationship score and shareholder returns, represented by headline earnings per share of selected South African companies. The research also sought to establish whether South African financial markets were inclined to react to brand-related market announcements.

The study utilised secondary quantitative data from various marketing and financial sources and used various statistical techniques to answer the research questions.

The study was able to establish a relationship between brand equity and shareholder returns for some sectors of the South African market. Although there was evidence that there was movement of the share prices of the shares under investigation, the study was unable to conclusively prove that the share price movements on the days after the brand announcement were directly attributable to the brand-related announcement.

There is growing pressure on the marketing fraternity to demonstrate the impact of brand investments on company financial performance. It is hoped that this research will contribute to the knowledge base and encourage more research into the subject.

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.

.....

Caroline Madikizela

.....

Date

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CHAPTER 1: BACKGROUND TO THE RESEARCH PROBLEM

1.1 Research Title

Evaluation of the impact of brand equity on shareholder returns amongst South African companies.

1.2 Research Problem

Marketing practitioners are increasingly coming under pressure to account for results of marketing investments. There is growing pressure on the marketing fraternity to demonstrate the impact of brand investments on company financial performance. This is reflected in the proliferation of conferences and calls for papers on the subject. For example, this subject is listed amongst the Marketing Science Institute's (MSI) research priorities for 2006 – 2008. MSI is calling for submission of research and papers linking marketing actions, brand, customer and channel equity with financial performance and firm value (Marketing Science Institute, 2007).

This research report starts from the premise articulated by de Mortanges and Van Riel (2003), which states that marketing has to result in the creation of value for the company's customers as well as its owners, i.e. shareholders as well. If this is the case, marketing practitioners should be held accountable for the implications of their activities on the company's financial returns.

Marketing spend has increased substantially over the last few years. In the United States alone, consumers are exposed to 3,000 more brands than they were exposed to in the 1990's. A substantial investment in brand building is

required if a brand has to stand out from the clutter. Brand building, however, involves substantial ongoing investments, which do not necessarily result in short-term profits – there is a lag effect between brand spending and results.

Marketers have long been arguing that brand building creates shareholder value but, in most cases, they have not been able to provide compelling financial evidence to support this assertion. Madden, Fehle and Fournier (2006) argue that marketers are still challenged to substantiate the value of branding in clear financial terms and this undermines marketing's credibility and standing in the firm, and even threatens marketing's existence as a distinct capability within the firm. Kerin and Sethuraman, quoted in de Mortanges and Van Riel (2003), argue that little attention has been paid to the effect of marketing decisions on the value of a company.

Davis (2002) declares that the lack of cooperation between marketing and finance in organisations in terms of measuring marketing's impact on financial performance makes the task even harder. He further argues that many senior managers in non-marketing roles see the money spent on brands as a cost rather than a crucial investment.

Madden *et al* (2006) disagree with this assertion and argue that the gap between marketing and finance is actually not significant. The issue is that they operate from different paradigms – the finance department's key stakeholders are shareholders and their main interest is the creation of shareholder value; the marketing department's key stakeholders are consumers and marketing's interest is in understanding the attitudes and behaviours that drive revenues in

the marketplace. Madden *et al* (2006) further argue that since the ultimate company performance metric is financial, marketing must substantiate their value add using financial language.

This realisation has brought about the need to better understand the relationship between brand investment and company financial performance. Typical questions that arise in this regard are the following: (i) does owning a strong brand indeed increase shareholder value? (ii) how is brand equity created? (iii) what is the value of brand equity? (iv) how much is a brand worth and, (v) how is that value to be measured?

Motameni and Shahrokhi (1998) argue that the challenge for marketers wishing to use brand valuation as a means of stressing the importance of the marketing function lies in dealing with the intangibility and value judgement elements of a brand's worth. They further argue that ultimate challenge for the marketing fraternity is, therefore, to come up with an instrument that will address and align both customer and market-place metrics.

1.3 Research Objectives

The research aimed at broadly exploring whether there is a relationship between strong brand equity and company financial performance. The research evaluated whether owning a brand with strong equity adds value to the firm.

More specifically, the research evaluated whether there is a relationship between strong brand equity, represented by the Markinor brand relationship score (BRS) and shareholder returns, represented by headline earnings per

share (HEPS) of selected South African companies. The research further sought to establish whether the relationship was positive or negative. The research also sought to establish the performance alluded to above is sustainable over time or does it increase or decrease regardless of whether high brand equity is maintained. In order to further establish the link between brand equity and shareholder return, the research also evaluated whether capital markets respond to any brand-related information.

A number of research studies have been conducted on the same topic internationally using a number of different brand equity indicators. Very little research has been conducted on the same topic locally and none of the studies have utilised the BrandMetrics, Interbrand or Markinor instruments as brand equity indicators. The research will assist in bridging the knowledge gap that exists locally on the subject and it is hoped that it will initiate further research into the topic.

1.4 Relevance of this topic to business in SA

The motivation for this research was both personal and relevant to the SA situation. On a personal level, the research arose out of the researcher's experiences as a marketing practitioner within a number of local as well as multinational companies (MNC's) operating in SA. The researcher was involved in countless boardroom debates over the justification for long-term investment in brand equity instead of investing in sales promotions that will yield immediate and measurable, albeit short-term results. This has been further reinforced by the fact that the researcher's current employer, SAB Miller, is also engaged in a

worldwide project of reviewing marketing and improving marketing spend efficiency.

On an SA business level, the marketing fraternity is under the accountability spotlight for a number of reasons, i.e.: the increase in marketing budgets is increasing the pressure to demonstrate the impact of brand investment; increased competition from international brands necessitates larger brand investments; growth of price-based competition (discounting) is eroding brand equity and brand equity results or effects are largely not being measured.

1.4.1 Growing pressure to demonstrate impact of brand investment

There is a strong call from academics and marketing practitioners to measure brand returns. The Gordon Institute of Business Science (GIBS) is attempting to lead this discussion by convening a workshop aimed at investigating marketing metrics are currently being used by SA marketing practitioners as well as guide other practitioners in developing metrics that will take into account shareholder returns.

Sinclair (2006) argues that it is no longer just the accountants that are putting emphasis on brand value, but financial analysts are also putting an emphasis on it now. He further argues that new corporate governance instruments like Sarbanes-Oxley, now require companies to report non-financial indicators in the narrative part of their annual reports.

1.4.2 Increased competition from international brands

SA's readmission into the global community has resulted in an increase in the number of new and international brands that are entering the market. Brand differentiation is the main basis of competition for these players, particularly, in the consumer goods field. Many of these brands' budgets are US dollar-denominated and often make up about 5% of the company's revenue, compared to around 1% for South African companies. In order to survive in this new landscape, local players are required to increase their marketing spending, particularly on brand building to create loyalty. Accounting officers, in turn, demand assurances of marketing's impact on the bottom-line, before advancing further funds for brand building.

1.4.3 Growth of price-based competition

SA marketing practitioners are concerned about the growth of price-based competition, often involving price promotions. The concern is that this will result in a deterioration of product categories into commodities. Marketers also argue that price-based competition is unsustainable and that more resources should be diverted into brand-building activities in order to develop points of differentiation that are sustainable. The problem, once again, is that brand-building efforts, unlike sales promotions, have little visible impact on sales in the short-run.

1.4.4 Brand equity effects are not measured

Research conducted by Markinor, a leading SA research firm, amongst senior SA marketing practitioners in 2006 indicates that few marketers are measuring

brand value, brand awareness and customer satisfaction, which are key elements that make up consumer-based brand equity and yet measure turnover and net profit on a regular basis (Markinor, 2006). The study suggests that marketers are either not aware of the importance of measurement of brand effects or are unaware of the existing tools for conducting such measurement.

1.5 Conclusion

The study will benefit the South African marketing fraternity in three ways. Firstly, the study highlights the elements of consumer-based brand equity measures, how they can be built, maintained and/ or strengthened. Marketing practitioners can use this framework to review their own brand strengths and weaknesses and identify the key measures to focus on in order to improve brand equity in a way that benefits the organisation. Secondly, the study demonstrates the importance of brand valuation and discusses the key brand valuation tools currently available in the market both locally and internationally. Finally, by demonstrating the link between continued brand investment and company financial performance, the study will go a long way towards starting to change finance's attitude towards brand investment and also closing the credibility gap marketing currently suffers due to the inability to demonstrate the link mentioned above.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

The literature review begins with a definition of the concepts of a brand and brand equity. This discussion highlights the complexity of the concepts as well as some of the key challenges faced by marketing executives and their companies in managing brands. Consumer-based brand equity (CBBE) will be discussed in detail. The major elements that make up brand equity and how each of these dimensions creates value for the customer - customer and consumer are used interchangeably - and the firm are discussed.

Following that will be a discussion of the variety of approaches for placing value on brand equity, brand value as well as the key measures of shareholder value. The shareholder value discussion includes a discussion of the key financial concepts used in brand valuation. This culminates in a discussion of the relationship between brand equity and shareholder value as well as a discussion of some empirical studies that have been conducted in the past to demonstrate a positive relationship between the two concepts.

2.2. Definition of a brand

A brand may be defined from a number of perspectives, i.e. from the consumer's perspective and/ or from the brand owner's perspective, in terms of their purpose, and sometimes even described by their characteristics (Wood, 2000). Keller (1993) suggests that a brand can be defined as "a name, term, sign, symbol or design, or combination of them which is intended to identify the goods and services of one seller or group of sellers and to differentiate them

from those of competitors" (Keller, 1993, p. 2). Keller refers to these individual brand components as "brand identities" and their totality "the brand".

Ambler, quoted in Wood 2000, on the other hand, feels that this definition is too product-oriented and has offered a consumer-oriented perspective, i.e. "the promise of bundles of attributes that someone buys and provide satisfaction ... The attributes that make up a brand may be real or illusory, rational or emotional, tangible or invisible", Wood, 2000, p. 664). What is clear from the latter definition is that a brand is more than just a symbol or logo and embodies tangible and intangible features. De Chernatony, quoted in Woods (2000) argues that a brand is something additional to a commodity product and added value accrues to the brand owner.

Wood (2000) offers an alternative, which states that a brand is a mechanism for achieving competitive advantage through differentiation through and that the differentiating attributes of a brand provide the customer with satisfaction and benefits for which they are willing to pay. Wood (2000) further argues that in consumer marketing, brands often provide the primary points of differentiation between competitive offerings, and as such, they can be critical to the success of companies.

The importance of brands is said to be reflected by firms' willingness to pay a substantial premium for purchasing well-known brands (Aaker, 1991). For example, in the 1990's, Kraft was purchased for more than 600% over its book value; the Nabisco brands were reportedly bought for more than any balance

sheet items were worth. Kerin and Sethuraman (1998) believe that the sizeable amount paid by these companies partly reflected the perceived economic value of the firm's brands to the acquirer. Sunkist is reportedly still receiving millions in royalties by licensing its name for use on hundreds of products. This leads to a discussion of the brand equity concept.

2.3. Outline of the concept of brand equity

Brand equity (BE) is a key measure in brand valuations, so, it is important to understand what brand equity stands for and how it is constituted.

Mackay (2001) argues, "there is no consensus about what brand equity means and how firms should measure the value of a brand. Consequently, it is difficult, if not impossible, to evaluate marketing interventions in terms of their ability to enhance brand value" (Mackay, 2001, p. 38). In spite of that, Winters, quoted in Wood (2000), argues that almost all conceptualizations of brand equity agree today that the phenomenon involves the value added to a product by consumers' associations and perceptions of a particular brand name. This, in turn, results in greater value for the brand name from the perspective of the firm.

Brand equity has been described by the Marketing Science Institute as "the set of associations and behaviour on the part of a brand's customers, channel members and parent corporation that permits the brand to earn greater volume or greater margins than it could without the brand name" (Wood, 2000). Leuthesser, quoted in Wood (2000), states that there are two aspects to brand equity – one from the point of view of the firm and the other from that of the

consumer. The firm/trade aspect of brand equity appears to be built around brand equity outcomes such as price and market share, whereas “customer-based brand equity” (Keller, 1993) appears to have attitudinal associations at its core. This study will be limited to the latter view.

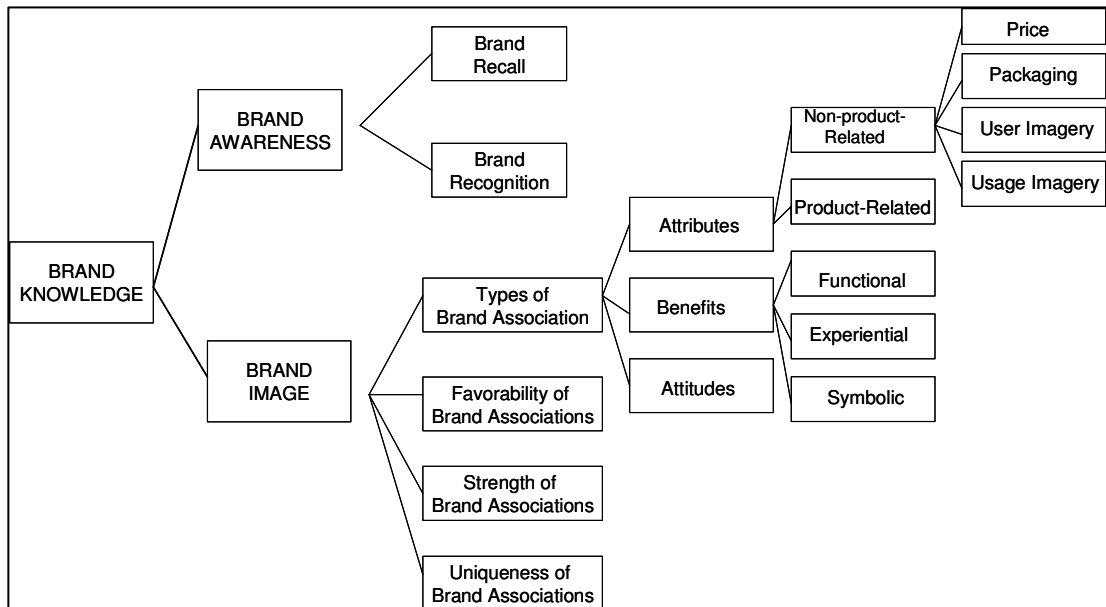
2.3.1. Customer-based brand equity

The prevailing view of brand equity is the customer-based equity (CBBE) framework conceptualised by Kevin Lane Keller. Keller (1993) defines CBBE as “the differential effect of brand knowledge on consumer response to the marketing of a brand” (Keller, 1993, p. 8). Differential effect is said to be determined by comparing consumer reaction to an element of the marketing mix for the brand to reaction to the same element when it is attributed to a fictitiously named or unnamed version of the product or brand. The premise of the CBBE model is that “the power of a brand lies in what customers have learned, felt, seen and heard about the brand over time. The power of a brand resides in the minds of customers” (Keller, 2001, p. 15).

The concept of brand knowledge is central to Keller’s CBBE framework. Keller (1993) states that brand knowledge has two components, i.e. brand awareness and brand image.

Figure 1 below is a diagrammatic depiction of the dimensions of brand knowledge.

Figure 1: Dimensions of Brand Knowledge



Source: Keller, K.L. (1993). Conceptualising, measuring and managing customer-based brand equity. *Journal of Marketing*. 57(1), 1-22

Brand awareness relates to "the likelihood that a brand name will come to mind and the likelihood with which it does so" (Keller, 1993, p. 3) and is made up of brand recall and brand recognition. Brand recall is the consumer's ability to confirm prior exposure to the brand when given the brand as a cue. Brand recognition, on the other hand, relates to the consumer's ability to confirm prior exposure to the brand when given the brand as a cue. Brand image relates to the perceptions about the brand held by the consumer. The strength of these associations, i.e. favourability, strength and uniqueness, play an important role in determining the differential response.

Keller argues that the advantage of conceptualising brand equity from the consumer perspective is that it enables managers to consider specifically how

their marketing program improves the value of their brands. He argues further that although the goal of any marketing program is to increase sales, and thus revenues and shareholder value, it is first necessary to establish consumer knowledge structures for the brand so that consumers respond positively to marketing activity for the brand. Keller (2001) takes the argument further and argues that strong brands succeed when consumer needs and wants are in harmony with the six brand building blocks, i.e. salience (deep, broad brand awareness), performance, imagery, judgements, feelings and resonance. Building brand equity thus requires “creating a familiar brand name and a positive brand image – that is, favourable, strong and unique brand associations” (Keller, 2001, p. 19). The aim is to increase brand familiarity. Familiarity will lead to a consumer’s ability to recall the brand. Familiarity is achieved through repeated exposure to a brand through, e.g. advertising, promotion and publicity. This emphasises the need for continued spending on brands.

Aaker (1991) has included additional consumer constructs to the BE concept, viz. brand loyalty, purchase intentions, and brand commitment as part of his conceptualisation of brand equity. Aaker (1991) and others have argued that these constructs are also key to understanding CBBE, particularly as it relates to purchase behaviour.

2.4. Benefits of Brand Equity

Marketing practitioners agree that brand equity generally adds or subtracts value (negative equity) value to consumers as well as to the organisation.

Rappaport, quoted in de Mortanges and Van Riel (2003), adds that brand equity influences sales growth and operating profit margins and is one of the factors that drive value. Keller (2001) argues that building a strong brand with great equity provides a firm with benefits such as greater customer loyalty and less vulnerability to competitive marketing actions or marketing crises; larger margins; more favourable customer response to price increases and decreases; greater trade or intermediary cooperation and support; increased marketing communication effectiveness; and licensing and brand extension opportunities. Some of the specific ways in which building a brand with great equity can yield benefits for the firm will now be discussed.

2.4.1. Ability to command a price premium over competitive brands

Davis (2002) contends that a strong brand is able to command a price premium over a competitive brand. Aaker (1991) contends that BE will usually allow higher margins by permitting both premium pricing and reduced reliance upon promotions. This is because branding focuses consumers on specific points of differentiation, e.g. unique product features, emotional benefits, etc. Davis (2002) asserts that the majority of customers are willing to pay a premium for their preferred brand. On the other hand, a short-term profitability drive through increasing price while decreasing brand investment allows customers to reassess the price/ value equation. This was said to be the experience for Kraft in the 1990s. Furthermore, a brand with a disadvantage in brand equity will have to invest more in promotional activity, sometimes just to maintain its position in the distribution channel.

2.4.2. Higher customer lifetime value as a result of stronger brand loyalty

Another benefit of a strong brand is a higher customer lifetime value resulting from stronger brand loyalty. Brand loyalty is defined by Hofmeyr & Rice as “the tendency of someone to buy a brand again and again because they prefer it” (Hofmeyr & Rice, 2000, p. 4). Loyalty is important in marketing because it is expensive to gain new customers and relatively inexpensive to keep existing ones, especially when the existing customers are satisfied with or even like the brand. Bain & Co (quoted in Hofmeyr & Rice, 2000) asserts that “it costs five times more to win a new customer than retain the customers you already have”. Davis (2002) contends that the reason brands aim to establish brand loyalty is that when a brand earns the trust and loyalty of a consumer, the consumer is more likely to repeat the positive experience rather than experiment with an untested product.

2.4.3. Enhancement of brand loyalty

David Aaker (1991) has further contended that brand loyalty is both one of the dimensions of brand equity and is also affected by brand equity. He asserts that four out of the five BE dimensions or assets he mentioned, i.e. brand awareness, perceived quality, brand associations, and other proprietary brand assets e.g. patents, can enhance brand loyalty. Perceived quality, the associations, and the well-known name can provide reasons to buy and affect use satisfaction. Even when they are not pivotal to brand choice, they can reassure, reducing the incentive to try others. Enhanced brand loyalty is especially important in buying time to respond when competitors innovate and obtain product advantages.

BE can also assist firms in generating marginal cash flow by enhancing programs to attract new customers or recapture old ones. For example, a promotion which provides an incentive to try a new flavour or new use will be more effective if the brand is familiar, and if there is no need to combat a consumer sceptical of brand quality. Keller (1991) also asserts that high levels of brand awareness and a positive brand image increase the probability of brand choice as well as produce greater consumer (and retailer) loyalty. Thus, consumer loyalty occurs when favourable beliefs and attitudes are manifested in repeat buying behaviour.

2.4.4. Other benefits

Davis (2002) is also of the opinion that BE lends immediate credibility to new product introductions or extensions and can present a barrier to entry to new competitors.

2.4.5. Consumer benefits of strong brand equity

BE elements also provide value to the consumers themselves by helping them to interpret, process and store huge amounts of information about products and brands, (Davis, 2002). They can also affect the customer's confidence in the purchase decision (due to either past experience or familiarity with the brand and its characteristics. Both perceived quality and brand associations can enhance customers' satisfaction with the use experience, e.g. knowing that a piece of jewellery is from Tiffany can affect the experience of wearing it.

2.4.6. Non-marketing related organisational benefits

Davis (2002) highlights other non-marketing related organisational benefits of BE, i.e. organisational focus and clarity, customer tolerance of company error, attraction of high calibre managerial staff and internal focus on improving service and product quality standards.

If possessing a strong brand has such tremendous benefits for the brand owner, it is important for a company to ensure that the brand name is managed carefully so that existing brand equity does not depreciate.

2.5. Double jeopardy

It must be pointed out at this point that the concept of brand equity is not without its critics. The concept was challenged in the 1990's by Ehrenberg who advanced a theory known as "double jeopardy". Ehrenberg, quoted in Chaudhuri (1995) argues that brand equity does not exist since factors such as repeat buying are linked directly to market share. He is of the opinion that brands that command large market shares are desirable because they have a greater number of buyers than small market share brands and also greater rates of repeat buying among their greater number of buyers. Mitchell (1992), argues further that "the notion that certain brands have greater potential than other brands in terms of "equity", or value, or growth potential is misleading and market share is all that managers should try to increase", Mitchell, quoted in Chaudhuri, 1995. This view has been rejected by a lot of academics.

2.6. Measures of Brand Equity

Ailawadi, Lehmann and Neslin (2003) cite the following reasons for measuring brand equity: (i) to guide marketing strategy and tactical decisions, (ii) to assess the extendibility of the brand, (iii) to evaluate the effectiveness of marketing decisions, (iv) to track the brand's health compared with that of competitors and over time, and (v) to assign a financial value to the brand in balance sheets and financial transactions.

Ailawadi *et al* (2003) have proposed that a robust brand equity measure should satisfy the following criteria:

- a. It should be grounded in theory;
- b. It should be complete, i.e. encompass all facets of brand equity, yet distinct from other concepts;
- c. It should be diagnostic, i.e. able to flag downturns or improvements in the brand's value and provide insights into the reasons for the change;
- d. It should be able to capture future potential in terms of future revenue stream and brand extendibility
- e. It should be objective, so that different people computing the measure would obtain the same value;
- f. It should be based on readily available data, so that the measure can be monitored on a regular basis for multiple brands in multiple product categories;
- g. It should be a single number, to enable easy tracking and communication;
- h. It should be intuitive and credible to senior management;

- i. It should be robust, reliable and stable over time, yet able to reflect real changes in brand health; and
- j. It should be validated against other equity measures and constructs that are theoretically associated with brand equity.

2.7. Brand Valuation

If brand equity has such benefits to an organisation, it is clearly an asset, albeit and intangible one. David Aaker (1991) is a key proponent of the argument that brands should be thought of as an asset. He defines an asset as “something a firm possesses, such as a brand name or retail location, which is superior to that of the competition... Assets and skills provide the basis of a competitive advantage that is sustainable. An asset is a generator of a profit stream..., especially when it is capitalised and appears on the balance sheet”, (Aaker, 1991, p. 14).

This leads one to a discussion of why it is important to value brands. There are two main reasons that have been put forward, one being financial and the other being strategic. From a financial perspective, it is important to estimate the value of a brand for merger, acquisition or divestiture purposes. In this instance, it is said to be important for buyers and sellers to agree on an acceptable value for the brand. The strategic motivation is driven by the need to improve marketing productivity. Given higher costs, greater competition and flattening demand in many markets, firms seek to increase the efficiency of their marketing expenses. Consequently, marketers need a more thorough understanding of consumer behaviour as a basis for making better strategic

decisions about target market definition and product positioning, as well as better tactical decisions about specific marketing mix actions.

The subject of brand value utilises a number of diverse disciplines, i.e. finance, financial accounting and marketing. The marketing concepts behind this idea were covered extensively in the previous section. Attention will now be turned to the key finance concepts utilised in brand valuations.

2.7.1. Shareholder Value

The idea behind shareholder value is that the primary goal for a corporation is to maximise shareholder value, i.e. either by paying dividends and/or increasing the stock price.

Koller, Goedhart and Wessels (2005) argue that companies create value by investing capital at rates of return that exceed their cost of capital. The more capital they can invest at attractive rates of return, the more value they will create, and as long as returns on capital exceed the cost of the capital, faster growth will create more value.

Madden *et al* (2006) emphasise the concept of opportunity cost by highlighting that “shareholder value is not created simply through positive stock returns or increased market capitalisation; rather, it occurs if and only if a company’s stock returns are higher than any returns the company’s shareholders might receive from alternative investments of similar risk” (Madden *et al*, 2006, p. 224). When one relates this to investment in branding, it means that for the brand

investment to add value to shareholders, the return from brand investment must be higher than the return the shareholders would receive from the stock market. Koller, Goedhart and Wessels (2005) stress that focusing on shareholder value results in healthier companies, which, in turn, provides spill over benefits, e.g. stronger economies, higher living standards, and more employment opportunities.

The key measures shareholders use to determine whether the value of their holdings in a company are increasing, decreasing or have remained unchanged, viz. total shareholder return, earnings per share and market-to-book ratio. Earnings per share (EPS) is a popular indicator of shareholder return. Firer, Ross, Westerfield and Jordan (2004) define EPS as a company's net profit after tax divided by the total number of shares in issue. EPS is computed as follows:

$$EPS = \frac{\text{Net profit after tax}}{\text{shares in issue}}$$

Many investors prefer to use Headline earnings per share (HEPS) as this strips out extraordinary items, e.g. profits or losses associated with the sale or termination of discontinued operations, fixed assets or related businesses, or from any permanent devaluation or write off of their values. According to Investopedia, headline earnings provides a stringent measurement tool. Investors can use it to compare and contrast different companies according to the standard method of accounting for net income (and EPS). HEPS is the main measure of shareholder return that will be utilised in this study.

Varaiya *et al*, quoted in de Mortanges and Van Riel (2003), state that a firm creates shareholder wealth by ensuring that the warranted market value of the equity capital invested in a firm by its shareholders exceeds the book value of equity. A firm creates value when the market-to-book ratio is greater than 1.0 ($M/B > 1$), destroys value when market-to-book ratio is less than 1.0 ($M/B < 1$), and sustains value if the market-to-book ratio is 1.0 ($M/B = 1$).

Shareholder value can also be determined by measuring total shareholder return (TSR), which is computed as follows:

$$TSR = (Price_{end} - Price_{begin} + Dividends) / Price_{begin}$$

2.7.2. Financial Valuation

Now that the context within which brand valuations takes place has been established, attention will be turned to a discussion of financial valuation. The key concepts involved in financial valuations will be discussed first and the section will end with a discussion of brand valuation and the key brand valuation methods that currently exist.

Steyn, Warren and Jonker (1998) define valuation as the procedure for arriving at an informed opinion about the value of an asset in monetary terms. Valuations are based on the key principles of the time value of money and the risk-return.

2.7.2.1. Value of an asset

The phrase time value of money refers to the fact that money received today is worth more than money promised at some time in the future, Steyn, Warren & Jonker (1998). This could be due to inflation, loss of interest receivable, loss of investment opportunities and the potential risk of default on the capital which is repayable.

The discounted cash flow (DCF) method it is the most commonly used method of valuing an asset. The DCF method involves calculating the value of a future cash flow to determine its worth today, using an appropriate discount rate or weighted average cost of capital (WACC). This discount rate used reflects the riskiness of the asset in question. The higher the risk, the higher the discount rate to be used; the lower the risk, the lower the discount rate to be used.

2.7.2.2. Value of an asset

The value of any asset depends on the cash flow (return) it is expected to generate for its owner during the period it is owned. Because of risk and the time value of money, investors prefer to receive cash flows earlier rather than later.

2.7.3. Key Brand Valuation Methods

Four general approaches for assessing the value of a brand are currently in use, viz. price premium, customer preference, replacement value, stock price movement methods and brand value based upon future earnings.

2.7.3.1. The price premium method

The price premium method is based on the price premium that the name can support. The value of a brand name in a given year would be that price differential multiplied by the unit sales volume. Discounting these cash flows over a reasonable time horizon would provide one approach to valuing the brand. Aaker (1991) states that this is not an ideal method for measuring brand equity where prices are fairly similar, e.g. cigarettes and airlines.

2.7.3.2. The customer preference method

This method measures brand strength in terms of customer preference, attitude or intent to purchase. The issue that is looked at here is how much the brand name provides to market share and brand loyalty. The value of the brand would then be marginal value of the extra sales (or market share) that the brand name supports (Aaker, 1991). Aaker (1991) criticises this method for being static, as it looks at the current power of the brand and doesn't take into account the future impact of improvements to the brand.

2.7.3.3. The replacement value method

This method bases the value of the brand on what it would cost to replace it, in other words, the cost of establishing a comparable name and business. If it would cost R 400m to establish a new brand to the same level as the current one, that is the replacement value.

2.7.3.4. The stock price method

The stock price movement method was developed by Simon and Sullivan. The method uses stock prices to value brand equity. The developers' main argument is that the stock market will adjust the price of a firm to reflect future prospects of a brand. The stock price movement method is based on the efficient-markets theory, which states that the company's stock price at any time "fully reflects" all available information on expected future cash flows to stockholders" (Simon and Sullivan, 1993, p. 31 – 32). Simon and Sullivan (1993) also contend that successful marketing activity will increase the demand for a company's stock, which will in turn cause the stock price to increase until the price of the stock fully reflects the expected future returns from the new information. If an event increases the future value of a firm, the increase is impounded into stock prices as soon as the news is revealed. Aaker (1991) argues that the model operates on the level of a publicly traded firm and thus will be most valid and useful for a firm with a dominant brand.

2.7.3.5. Well-known brand valuation instruments

(i) The Interbrand Method

An example of a brand valuation method which uses DCF is the Interbrand method, which measures brand equity from brand-related financial data. The valuation first determines the earnings of a brand, and then adjusts that figure with a brand-strength multiplier consisting of seven brand-related factors: leadership, stability, market environment, internationality, trend, communications support, and legal protection (Ourusoff, found in Silverman,

Sprott and Pascal, 1999). Barth *et al*, quoted in Madden *et al* (2006), found Interbrand’s valuation estimates to be “relevant and sufficiently reliable for use in financial reporting statements” (Madden *et al*, 2006, p. 226). The Interbrand method is the most widely used brand valuation method and ten key South African brands were valued in 2005 using this method.

(ii) The BrandMetrics Method

Another method which uses the DCF method is BrandMetrics method. This South African developed method measures the future economic benefits of the brand asset. Brand value is the capitalised present value of the income stream that flows from the brand’s users.

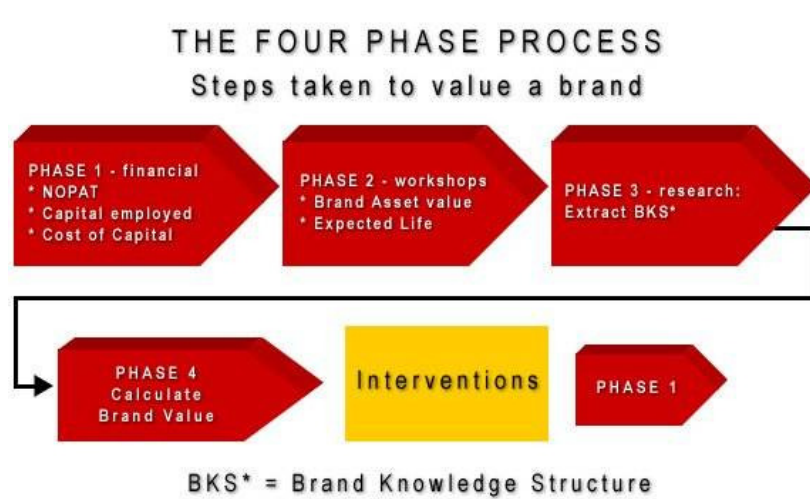


Figure 2: BrandMetrics Brand Valuation Process
Source: www.brandmetrics.co.za

Figure 2 above is a summary of the four step process uses to arrive at brand value. The method has been used to evaluate 360 brands since 1999.

(iii) The Markinor Brand Relationship measure

Although it is not strictly a brand equity measure, the Markinor brand relationship instrument is used by many South African marketing practitioners as a proxy for brand equity. The method does not fit into any of the categories discussed above but is most closely related to the customer preference method. Markinor states that “the purpose of the Markinor brand relationship score is to provide businesses, investors and the consumers with a brand health measurement” (Markinor, 2006). Markinor has been using this method since 1992 and publishes the results annually.

The top brands survey consists of two modules, a business-to-consumer (B2C) survey and a business-to-business survey. Data for the Top Brands survey is collected annually through Markinor’s national omnibus survey. The sample covers South African adults aged 16 years and above and is designed to be representative of the South African population. A total of 3,488 interviews are conducted, i.e. 2,000 in the metropolitan areas and 1,488 in the rural areas. Respondents are asked 3 questions only and based on their answers a brand relationship score is calculated based on spontaneous awareness, levels of trust and confidence as well as commitment/ loyalty experienced by the respondent. Markinor uses three dimensions, i.e. spontaneous awareness, trust and confidence and brand commitment to compute a brand relationship score. The resulting brand relationship score is used to represent the strength of the brand relative to its competitors.

$$\text{Brand Relationship Score} = \text{Spontaneous Awareness} + \text{Trust \& Confidence} + \text{Commitment}$$

This Markinor instrument is grounded in theory in that it does measure key CBBE elements but its main shortcoming is that it does not meet all of the criteria set out by Ailawada *et al* (2003), i.e. it should encompass all facets of brand equity, does not capture future potential in terms of future revenue stream and brand extendibility and has not been validated against other equity measures and constructs that are theoretically associated with brand equity.

The Markinor instrument is, however, relied upon by many SA companies as an indicator of BE and as such, will be used as one of the brand equity indicators in this study.

2.8. Empirical studies linking Brand Equity and Shareholder Value

A number of recent studies have reported a link between branding and a firm's financial performance. A few of these studies are highlighted in this section.

A study by Simon and Sullivan (1993) demonstrated a link between brand equity and MTB ratio. They compared companies' that appeared on the 1995 and 1997 Interbrand top brand list and their market

A study by de Mortanges and Van Riel (2003) found a positive relationship between brand equity and shareholder value. The study investigated 43 Dutch companies and compared directional changes in the Brand Asset Evaluator[®] (BAV) power grid, which measures brand stature and brand strength, with directional changes in shareholder value, i.e. market-to-book ratio, TSR and EPS between two points in time, i.e. 1993 and 1997. The authors concluded that changes in brand equity might have a significant impact on the value of a firm. Condiar, Crask and Zinkhan, found in found in Madden *et al*, 2006, established a relationship between a firm's advertising and promotion spending

and its market value of the firm, thus supporting the link between a firm's brand-building activities and its market value.

Using the Fama Fench method, Madden *et al* (2006) were able to demonstrate that changes in brand equity are associated with changes in firm value. The authors found that a "portfolio of brands identified as strong according to Interbrand's valuation method displayed statistically and economically significant performance advantages compared with the overall market", Madden *et al*, 2006, . Based on the results of their research, they further argue that firms that have developed strong brands create value for their shareholders by yielding returns that are greater in magnitude than a relevant market benchmark do so with less risk.

Madden *et al* (2006) further argue that although the link between brand equity and shareholder value has been created, this does not unequivocally constitute evidence of shareholder value creation by brands. They argue that "shareholder value is not created simply by positive stock returns or increased market capitalisation; rather, it occurs if and only if a company's stock returns are higher than any returns the company's shareholders might receive from alternative investments of similar risk" (Madden *et al*, 2006, p.225).

According to Simon and Sullivan (1993), some researchers have claimed that investors ignore brand equity. Fredericks, quoted in Simon and Sullivan (1993), states that "brands are largely ignored by the financial community" (Simon and Sullivan, 1993: 48). Their research has shown that market factors are reflected in stock prices.

2.9. Conclusion to the Literature Review

The literature review has primarily focused on understanding the concept of branding and brand equity as well as their benefits to the firm and its shareholders. Most of the literature encountered dealt with consumer-based brand equity and little attention has been paid to market-based brand equity.

The literature review established that brand equity involves “the value added to a product by consumers’ associations and perceptions of a particular brand name”. The benefits of consumer-based brand equity were also demonstrated. The literature highlighted the ability to command a price premium over competitors, customer lifetime value as a result of increased loyalty as being the key benefits of owning a strong brand. The literature also details how consumer-based brand equity can be built, maintained and/ or strengthened.

The need for robust evaluation of marketing efforts was established. The literature highlights that the biggest challenge faced by the marketing fraternity in managing brands today is that marketing is a large investment that yields long-term results while companies want short-term results (short-termism), mainly attributable to the quarterly stock reporting requirement.

The literature also highlighted how marketers are faced with the challenge of demonstrating marketing performance using as “silver bullet metric” (Ambler & Roberts, 2006). It was established that marketing practitioners need to embrace this challenge as lack of financial accountability is undermining marketing’s credibility and standing in the firm.

The literature review established that brands do indeed have value and that is why major corporations are prepared to pay values which are larger than the book value of their assets to acquire them. Simon and Sullivan (1993) demonstrated that strong brand equity would manifest in the financial market value of a firm, and, ultimately, shareholder value.

The literature revealed a gap for research that establishes the link between brand equity and shareholder value within a South African context. This study aims to bridge this gap between theory and implementation in SA.

2.10. Possible research questions

The previous literature review suggests that the questions indicated below need to be investigated. It has been established that strong brands are likely to have higher awareness levels and higher market shares than their competitors. What would need to be probed further in research are the following questions:

- **Research question 1:** what is the relationship between strong brand equity and shareholder return within the South African context?
- **Research question 2:** if there is indeed a relationship, is this positive or negative?
- **Research Question 3:** do South African financial markets respond to any changes in brand equity?
- **Research Question 4:** is it possible for the investor to get stronger financial returns from investing in a brand than from investing in the stock market?

CHAPTER 3: HYPOTHESES TO BE TESTED

3.1. Introduction

From the preceding literature review, the hypotheses described below were drawn and will be tested in the research.

3.2. Hypothesis 1

De Mortanges and Van Riel (2003) have suggested that there is a positive relationship between brand equity and shareholder value. This assertion must be established within a South African context.

The null hypothesis, therefore, states that there no relationship between a brand's relationship score and its headline earnings per share.

The alternative hypothesis states that there is a relationship between a company's brand relationship score and its headline earnings per share.

3.3. Hypothesis 2

A company's share price serves as an indication of the shareholders' confidence in the company's ability to generate future profits.

Simon and Sullivan (1993) have claimed that "the company's stock price at any time 'fully reflects' all available information on expected future cash flows to stockholders" (Simon and Sullivan, 1993, p. 31–32). This suggests that positive marketing activities would likely increase the demand for the company's stock, which would, in turn, increase the company's stock price. It is expected, therefore, that an announcement about positive brand developments would cause the stock of the company that owns that particular brand to increase.

The intention in this section is, therefore, to determine if the stock price would be affected by information relating to a brand.

The null hypothesis states that the share price will not react to the release of important brand-related information. The alternative hypothesis states that the share price will react to the release of important brand-related information, i.e. the share price will either increase or decrease.

3.4. Conclusion

This section identified a number of hypotheses relating to brand equity and its impact on a firm's financial returns. The hypotheses identified above will be tested in Chapter 4.

CHAPTER 4: RESEARCH METHODOLOGY

4.1. Introduction

This section details the research methodology employed by the researcher to gather and analyse data for this study.

4.2. Research Design

Zikmund (2003) states that the design of the research is determined by four key constraints: (i) objectives of the research (ii) the available data sources (iii) the urgency of the decision and, (iv) the cost of obtaining the data. These factors were taken into account when this study was designed.

4.2.1. Type of Study

This research study falls under the classification of causal research. Causal research is conducted in order to identify cause-and-effect relationships among variables, (Zikmund, 2003). Causal research “attempts to establish that when we do one thing, another thing will follow” (Zikmund, 2003, p. 56). Zikmund (2003) argues that a causal relationship is difficult to prove scientifically as one would have to change one variable in order to effect a change in another variable (Zikmund, 2003); however, this does not stop researchers from attempting to prove causation.

The variables under consideration were brand equity and shareholder returns. The Markinor brand relationship score was used to represent brand equity and headline earnings per share was used to represent shareholder returns.

The objective of the research was to determine whether a relationship existed between the variables under investigation and did not seek to establish causation.

4.2.2. Research method

The research utilised secondary or historical quantitative data. Secondary data is data that was previously collected and assembled for some project other than the one at hand, (Zikmund, 2003). Secondary data was chosen in this case because the information required for the analysis already existed, so, the researcher would not have to reinvent the wheel. It could also be gathered faster and more inexpensively than primary data. Zikmund refers to the process applied in this study as model building, i.e. “an attempt to specify relationships between variables based on secondary data, sometimes using descriptive or predictive equations” (Zikmund, 2003, p. 139).

One of the shortcomings of secondary data is that it might be outdated. The researcher safeguarded against this by ensuring that the data utilised was not older than four years.

4.2.3. Unit of analysis

The unit of analysis refers to where the level of investigation is focused. The unit of analysis for this study was the brand.

It is important that the link between brands and companies be highlighted at this point. Companies are listed on the stock exchange, not brands. However, these companies own the brands and use them to trade in the market. The financial returns that are reflected by the companies on the stock exchange are as a

result of brand activity. Since brands are not listed on the stock exchange, this study uses company performance on the stock exchange as an indicator of brand performance.

4.2.4. Target population

A population is a complete set of individuals that have some common characteristic, Zikmund (2003). A target population is the complete group of specific population elements relevant to the research project - the group that the researcher seeks to generalise the results to, Zikmund (2003).

The target population for this study consisted of all brands competing in the South African market.

4.2.5. Sampling

Sampling is any procedure that uses a small number of items or a portion of a population to make a conclusion regarding the whole population (Zikmund, 2003). Zikmund (2003) further states that a precondition for sampling is that the selected sample has to be representative of the population under study in order for the research to be able to make generalisations about the population of interest. The various elements of the sampling process, i.e. sampling frame, method, size, and sampling units, are discussed below.

4.2.5.1. Sampling frame

A sampling frame is the list of elements from which the sample may be drawn. The sample frame for this study consists of all the brands that were listed in the Markinor top brands report for 2006.

4.2.5.2. Sampling method for selecting the sample

A non-probability purposive sampling technique was utilised for this study.

A non-probability sample is defined as a sample “in which units of the sample are selected on the basis of personal judgement or convenience” (Zikmund, 2003, p. 380). In the case of purposive sampling, the researcher selects the sample based on some appropriate characteristics of the sample members.

The sampling units were selected according to the following criteria:

1. The brands must have been trading in South Africa.
2. The brands must have appeared on the Markinor Top Brands list in the last 4 years. This was also in order to allow for the tracking of the brand's relationship score over a long period, i.e. four years.
3. The companies owning the brands must have been publicly held companies, listed on the JSE Securities Exchange. This was to allow for easy access to the companies' financial data, as it would be publicly available.
4. The companies owning the brands must have been listed on the JSE for the last four years. The reason for this was so that the company financial performance could be tracked over a long period, i.e. four years.

According to Zikmund (2003), there are no appropriate statistical techniques for measuring random sampling error from a non-probability sample, so, projecting the data beyond the sample is inappropriate.

4.2.5.2.1. Sample size

Zikmund (2003) states that large sample sizes are typically more precise than small samples. A sample of no less than 30 units is usually recommended as this is understood to be a statistically significant sample size.

Every attempt was made to ensure a sample size over 30, however, due to unavailability of financial data on some brands that belonged to unlisted companies, it was only possible to analyse 21 brands in total. The brands that were analysed came from the banking, long-term insurance, short-term insurance, grocery and convenience stores, fast food chains, furniture stores as well as the telecommunications sectors for the market.

4.3. Data Gathering

Two types of data were utilised for the study, i.e. financial indicators and branding data.

Financial indicators were sourced from the ShareMagic™ PRO stock market analysis programme. This programme provides a 10-year history of both technical and fundamental data on JSE-listed companies. HEPS, Share Price and other company-related information were obtained via the technical reports produced by this programme. Secondary information was on the companies was also gleaned from online financial reports as well as SENS (an online investor relations website).

The first set of branding information, i.e. Brand Relationship scores, were obtained from Markinor and also supplemented with reports from the Brands

and Branding website - Markinor supplied the 2006 top brands report, which contained the 2006 and 2005 scores. 2004 and 2003 data was obtained from the brands and branding website. The reports listed the weighted awareness, loyalty, trust & confidence as well as weighted brand relationship scores for the top ten brands in each category.

The second set of branding information, the Interbrand brand valuations for South African companies, was obtained from an article published in bizcommunity.com. This is a South African marketing, advertising and public relations website. The construction of both methodologies was discussed earlier in the literature review section. Attempts were made to source other brand valuations from one of the brand valuation companies mentioned earlier in the literature review in order to increase the sample size, but the request was declined as the data is said to be proprietary.

The Markinor top brands data was used to select the final list of brands that would be analysed as part of this study. The Markinor instrument has been used as many Marketers in SA, unable to obtain funds for research, rely on this as a key measure of their brand's equity. The Top Brands data has been found to be useful by many marketers as it tends to be in line with market share trends. HEPS data for the selected companies was obtained via Share Magic PRO.

Within categories, the top five brands were considered first, looking a whether the brand was owned by a publicly listed company and thereafter, whether the

last 4 years' data was available. Where there were some missing data sets, the next brand on the list was selected.

4.4. The data analysis method

Two levels of statistical analysis were conducted and these are discussed below.

4.4.1. Data analysis for hypothesis 1

The data analysis method used for testing this hypothesis was linear regression and correlation analysis. The brand relationship scores for the identified brands for 2003, 2004, 2005 and 2006, were paired with HEPS for their holding companies for the same years and a regression and correlation analysis was conducted in order to determine if a relationship existed between them and if it does exist, the direction and strength of such a relationship.

In this exercise, each of the brand's relationship scores and HEPS were obtained and analysed for trends. These results are presented in the appendix. The variables were then paired and plotted on the scatter plot. Thereafter, a simple correlation coefficient was calculated for each of the pairs using the correlation function in Microsoft Excel. Thereafter, a more detailed analysis was conducted utilising a Statistics package.

The correlation coefficient is a number that gives a numeric indication of the strength of the relationship between the two variables. A summary table with the correlation results for each brand appears at the end of this hypothesis discussion.

It is important here to highlight why regression and correlation analysis was deemed the appropriate methodology to use. Swift (2001) indicates that correlation is a useful method for describing the relationship between two variables. It measures the *strength* and *direction* of a linear relationship between two numerical variables. Swift (2001) further suggests that the best way to start a correlation analysis is to plot the paired data on a scatter plot and then examine the scatter plot for trends. The relationship is “strong” if the points in a scatter plot cluster tightly around some straight line. If this straight line rises from the left to the right, then the relationship is positive and the measures are positive numbers. If it falls from left to right, then the relationship is negative and the measures are negative numbers.

A correlation coefficient provides an objective measure of the strength of the relationship between the variables. Swift (2001) indicates that a correlation is always between -1 and +1. A correlation equal to zero or near zero indicates practically no relationship. A correlation magnitude close to 1, on the other hand, indicates a strong linear relationship. At the extreme, a correlation equal to -1 or +1 occurs only when the linear relationship is perfect, i.e. when all the points on the scatter plot lie on a single straight line. The closer it is to either of these two extremes, the closer the points in a scatter plot are to some straight line, either in the negative or positive direction. On the other hand, if the correlation is close to 0, then the scatter plot is typically a “cloud” of points with no apparent relationship.

Swift (2001) cautions that a correlation is relevant only for measuring linear relationships. If there is a non-linear relationship, the correlation can be completely misleading. If the correlation is close to 0, we cannot automatically conclude that there is no relationship between the two variables. Zikmund (2003) cautions that correlation does not mean causation and states that, no matter how strongly correlated the variables may be, it does not mean that x causes y .

4.4.2. Data analysis for hypothesis 2

A variation of the 'event study' method (Simon and Sullivan, 1993) was utilised to test this hypothesis. Simon and Sullivan used the event study method to measure the impact of an event on brand equity by comparing the value of brand equity at two points in time: 'before any "pre-event" information becomes available and some time after the information has been released to the public, allowing "post-event information" to be released.

Interbrand and the Financial Mail at a glittering function released the first SA brand valuations on Monday, 9th May 2005. It is suggested that the investors (current and new) will respond positively to these news and as such will buy more of these shares, causing the share prices to soar. It is further suggested that the share prices of the brands that were valued will show a higher than average share price increase on the day of the announcement and the days after the announcement as the investors will respond favourably to these news.

It is believed that it usually takes the financial markets about a month to process information about a stock. Share prices for the concerned brand-owning companies for the month preceding the event as well as the month after the event were obtained. The event window proved to be too big as it diverted focus from the 9th May. The event window was then reduced to the week before and the week after the event. The actual and percentage daily change in the share price was calculated for all the identified brands. The percentage change was plotted on a time series chart and analysed for any trends. To statistically verify the differences between the weeks, one-way ANOVA was also conducted. The researcher was concerned about the presence of a “third variable” that might result in a misleading conclusion being reached, so, SENS data - investor relations information supplied to the stock exchange - was analysed to determine if there was any information released to the financial markets that could have influenced the share price in either direction around the time of the event.

4.5. Research limitations

The research conducted had the following limitations:

- Unavailability of extensive brand valuations except the ones already in the public domain, was a major limitation of this study. The information is considered proprietary/ strategic information by firms, and, hence, they were not prepared to divulge it.
- The scope was limited to brands owned by publicly listed companies. Data for publicly listed companies is freely available, as a legal requirement, and as a result is easier to obtain. This means that potentially strong brands from

private companies may be excluded from the analysis, e.g. brands in the Pioneer stable, e.g. Liqui Fruit and Ceres fruit juices.

- Some companies own a number of brands. Reporting takes place at group level and not at individual brand level. In such cases, it is difficult to work out what the brand's contribution is to the company's performance.
- Some brands have had to be excluded from the study as they are held off-shore and it is difficult to work out what SA's contribution is to that company's performance, Unilever brands, Coca Cola brands, Nike, etc.

CHAPTER 5: RESULTS

5.1. Introduction

This section documents the findings from the analysis conducted in Chapter 4 that either supports or refutes the research hypotheses. The results are presented with each hypothesis being used as a sub-heading. A conclusion is drawn at the end of the chapter as to whether the evidence supports the null or the alternative hypothesis.

5.2. Hypothesis 1

The null hypothesis stated that there is no relationship between a company's brand relationship score its headline earnings per share. The alternative hypothesis stated that there is a relationship between a company's brand relationship score and its headline earnings per share.

Before proceeding with the presentation of the results, it is important to recap on the research sample. The unit of analysis for the study is the brand. A total of 21 brands were analysed and they fell into the following market sectors: banking, grocery and convenience stores, fast food restaurants, furniture retailers, telecommunications providers, long-term insurance providers, and short-term insurance providers. Table 1 contains a list of all the brands analysed in this section of the study as well as summary statistics for the sample. The respective brand relationship scores and headline earnings per share figures for 2003 – 2006 are listed in the appendix.

Table 1: Research Sample

ANALYSIS SAMPLE				
#	BRANDS	CATEGORY	Mean Brand Relationship Score	Mean Headline Earnings Per Share
1	ABSA	Bank	8.4	36.8
2	Standard Bank	Bank	6.5	40.5
3	First National Bank	Bank	1.2	31.3
4	Nedbank	Bank	6.0	8.6
5	African Bank	Bank	1.8	2.0
6	Shoprite	Grocery & convenience store	1.0	22.9
7	Pick 'n Pay	Grocery & convenience store	1.2	23.8
8	Spar	Grocery & convenience store	1.9	22.8
9	Woolies	Grocery & convenience store	0.8	4.2
10	Spur	Fast Food Restaurant	0.5	8.4
11	Ellerines	Furniture store	5.3	18.4
12	Joshua Doore	Furniture store	6.0	11.2
13	MTN	Telecommunications provider	3.5	35.0
14	Telkom	Telecommunications provider	10.5	36.8
15	Old Mutual	Long-term insurance	2.1	25.8
16	Sanlam	Long-term insurance	1.9	13.6
17	Metropolitan (Life)	Long-term insurance	2.6	12.3
18	Clientele	Long-term insurance	2.2	3.1
19	Liberty Group	Long-term insurance	6.3	2.6
20	Santam	Short-term insurance	13.5	3.8
21	Mutual & Federal	Short-term insurance	4.3	3.4
Summary Statistics □ 2003 - 2006				
n = 21				
Mean			4.0	17.2
Median			2.7	14.3
Mode				11.6
Minimum			-0.5	1.0
Maximum			17.3	48.4

Many other brands were considered but not analysed further, e.g. cellphones, electric & electronic appliances, automobiles, petrol due to them not being held offshore and not listed on the JSE. A lot of the fast moving consumer goods (FMCG) brands were also excluded from the analysis due to the fact that most of the top 10 brands in the categories are consolidated under the same company, e.g. soft drinks - Coke, Fanta, Sprite, Twist, Schweppes belong to the Coca Cola company; beer - Castle, Carling Black Label, Hansa, Castle Milk

Stout, belong to SAB Miller. There is a similar pattern with chocolates, foods kept in the fridge, etc.

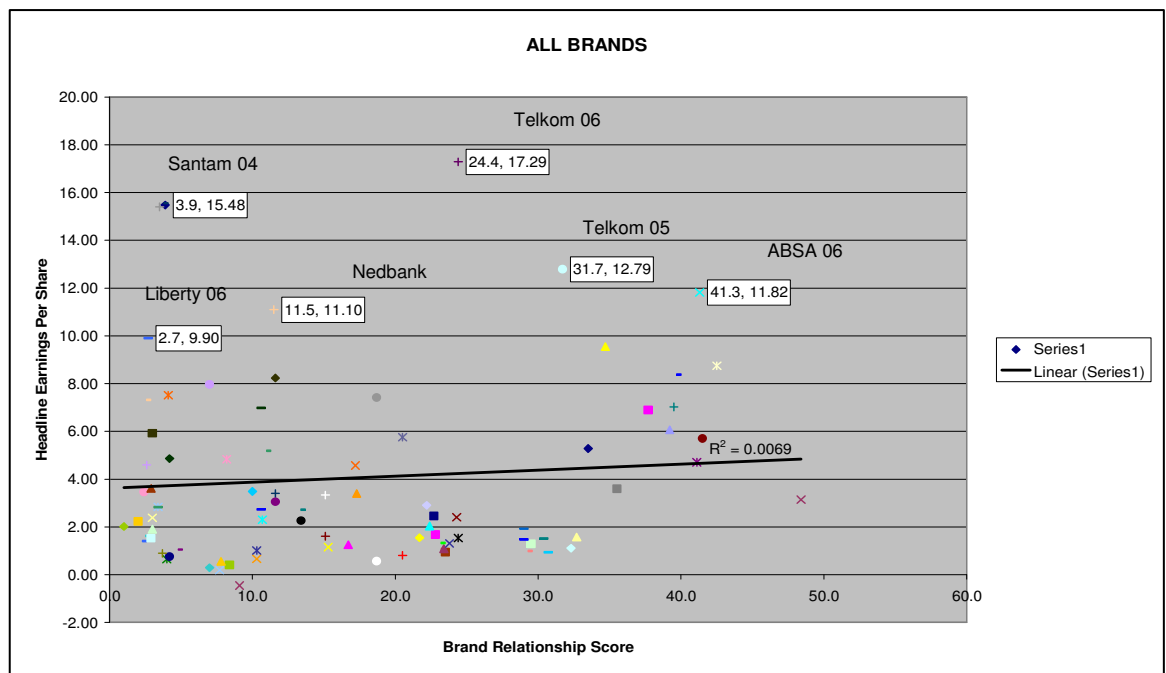
Regression and correlation analysis was utilised to determine the direction and strength of the relationship between the brand relationship score and headline earnings per share for the identified brands and companies. Analysis was conducted at market/ JSE level to determine whether a market trend could be determined and at category level, to determine whether a category trend was evident.

5.2.1. Market level correlation

The figure below represents the scatter plot for the 21 brands analysed.

The corresponding statistical calculations for the scatter plots in this section are in the Appendix.

Figure 3: Scatter plot for all 21 brands



$r = 0.08$

The plots are a swarm all over the scatter plot, with no apparent pattern. This is a first indication that there might be very little correlation between the variables under study. The correlation coefficient is 0.08, which suggests an extremely weak correlation between the brands' BRS and the HEPS at market level.

The R^2 value indicates the goodness of a linear fit. The better the linear fit is, the closer R^2 is to 1. In this case, it is less than 0.01%, which indicates no linearity. There are a number of outliers that are falling away from the regression line and are not following the regression pattern, i.e. ABSA in 2006, Telkom in 2005 and 2006, etc. The outliers are marked on the scatter plot.

5.2.2. Individual Firm Correlation

A correlation exercise was also conducted using the individual brands and their corresponding companies' EPS to determine whether there was an association at individual firm and category level. The results are discussed below.

5.2.2.1. Banking Institutions

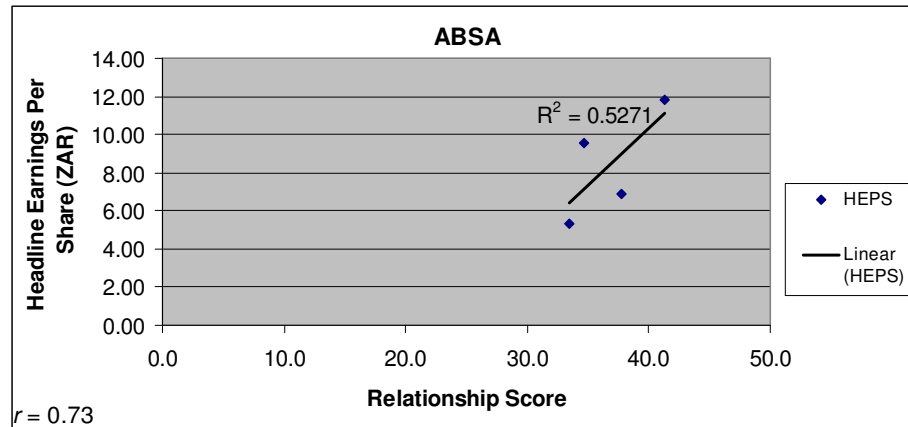
ABSA, Standard Bank (SBSA), First National Bank (FNB), Nedbank and African Bank are the banks that were analysed. The former 4 are the dominant players in the industry and are more popularly known as the "Big 4". African Bank, on the other hand, is a niche bank, focusing on the unsecured credit lending sector of the market. It has been added for comparison purposes.

ABSA

The points on the scatter plot are clustered on the right hand side of the plot, and it appears that for each high brand relationship score, the corresponding

HEPS value is also high. This suggests a positive relationship between the variables. A correlation coefficient of 0.73 suggests a moderate to strong linear correlation between the brand relationship score and HEPS for ABSA.

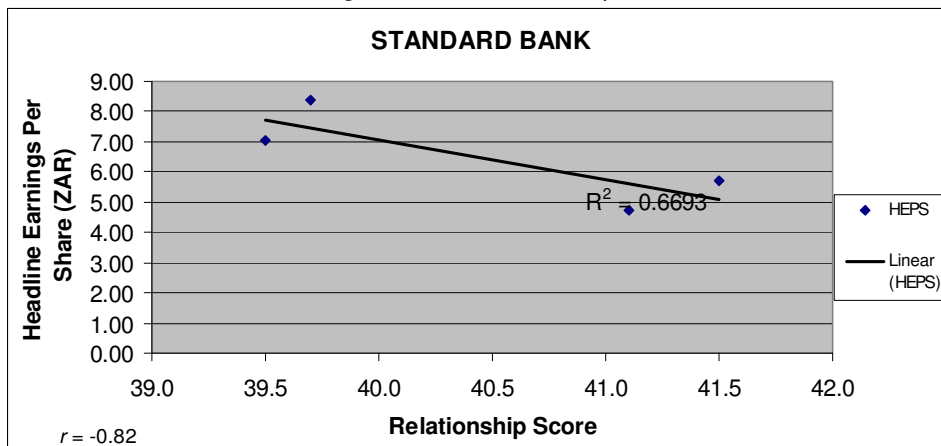
Figure 4: ABSA Scatter plot



The results further indicate that the movement in the brand relationship score can account for 53% of the variance in HEPS.

Standard Bank

Figure 5: SBSA Scatter plot



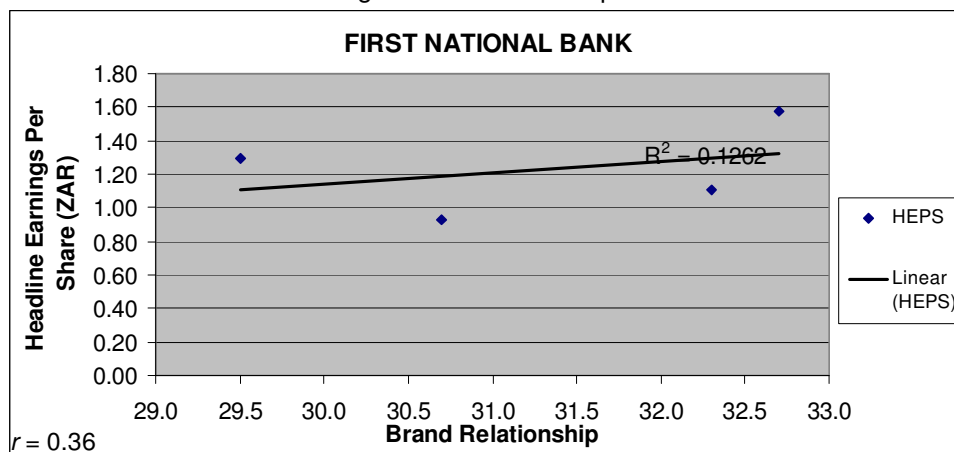
The variables are scattered, with no apparent pattern, which would suggest a weak relationship between the variables. It is noted that the correlation coefficient is -0.82. This suggests a strong inverse relationship between the brand relationship score and HEPS for SBSA. The results further indicate that

67% of the variance in HEPS can be accounted for by the movement in the brand relationship score.

First National Bank

The scatter plot for FNB is curvilinear, which would indicate non-existence of a linear relationship between the variables under consideration. The computed correlation coefficient is 0.36, which suggests a weak to moderate linear correlation.

Figure 6: FNB Scatter plot



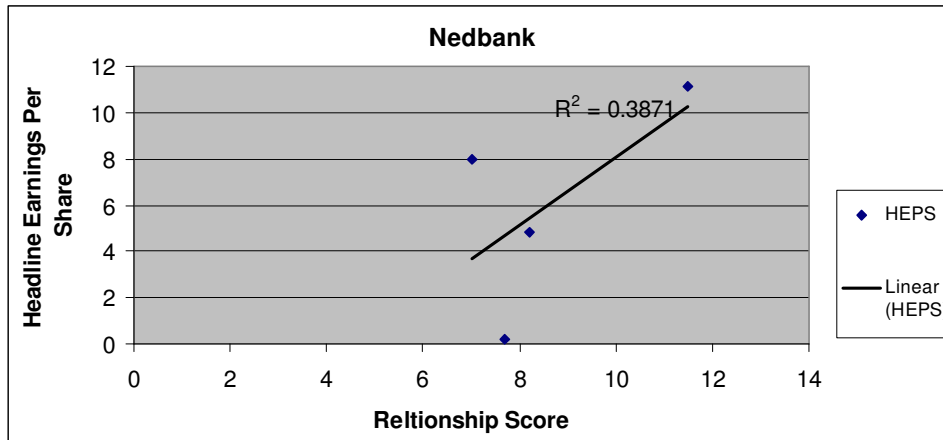
Swift (2001) cautions that calculating a correlation coefficient when there's a curvilinear scatter plot could be misleading as the value might be understood to indicate a linear relationship when the existing relationship is non-linear. This result is further reinforced by an R^2 value of 39%. The conclusion must be reached in this case, therefore, that a non-linear relationship is likely to exist between the brand relationship score and HEPS for FNB.

Nedbank

The arrangement of the variables on the scatter plot suggests a positive relationship between the BRS and HEPS. It is noted that Nedbank's correlation coefficient is 0.62, which indicates a moderate association between the brand

relationship score and HEPS. This suggests a positive linear relationship exists between the brand relationship score and HEPS for ABSA.

Figure 7: Nedbank Scatter plot

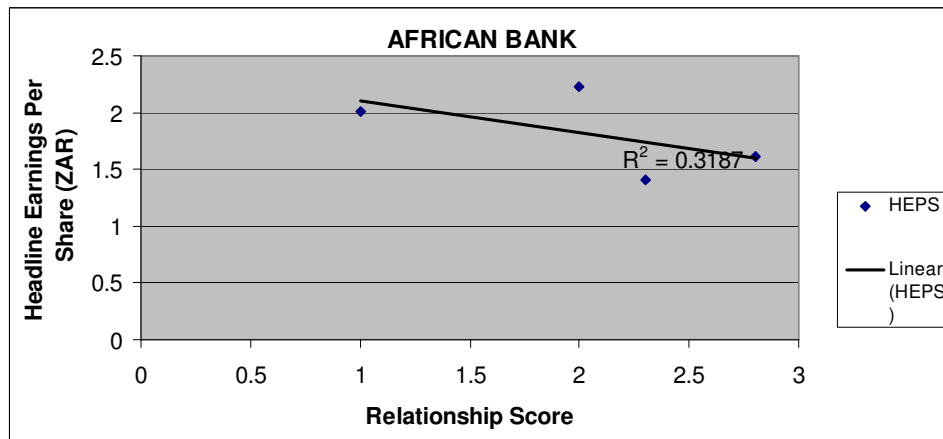


$r = 0.62$

The R^2 value indicates that the movement in the brand relationship score can account for only 39% of the variance in HEPS.

African Bank

Figure 8: African Bank Scatter plot



$r = -0.56$

The points on the scatter plot do not appear to have a definitive pattern. This suggests that a negative relationship exists between African Bank's BRS and HEPS. It is also noted that African Bank's correlation coefficient is -0.56, which suggests a negative or no relationship between the brand relationship score

and HEPS for African Bank. The R^2 value indicates that only 32% of the variance in HEPS can be accounted for by the movement in the brand relationship score.

Conclusion:

The results indicate a moderate to strong positive correlation between the BRS and HEPS for ABSA, FNB and Nedbank and a negative correlation between the BRS and HEPS for Standard Bank and African Bank.

5.2.2.2. Grocery and convenience stores

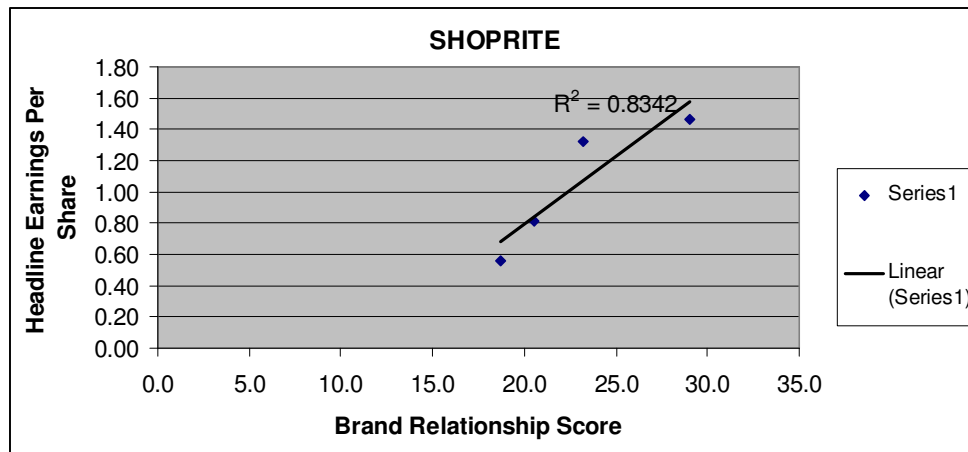
Analysis of this sector is very important as retailers are amongst the top advertisers in the country. Hence, it is important to determine that the shareholders are realising a return on their investment.

4 Brands were analysed in this sector, i.e. Shoprite, Pick 'n Pay, Spar and Woolies. Shoprite appears twice in the top 10 for this sector, as Shoprite and as Shoprite/ Checkers; Checkers also appears twice, as Checkers and as Shoprite/ Checkers; Hyperama, is also still on the list.

As inconvenient as this is to a researcher, it is also understandable as the list is meant to be an indicator of consumer perceptions rather than shareholder perceptions. Since Shoprite is largest contributor to the Shoprite Group portfolio, a decision was made to use its BRS was used as a proxy for the Shoprite Group's BRS.

Shoprite

Figure 9: Shoprite Scatter plot



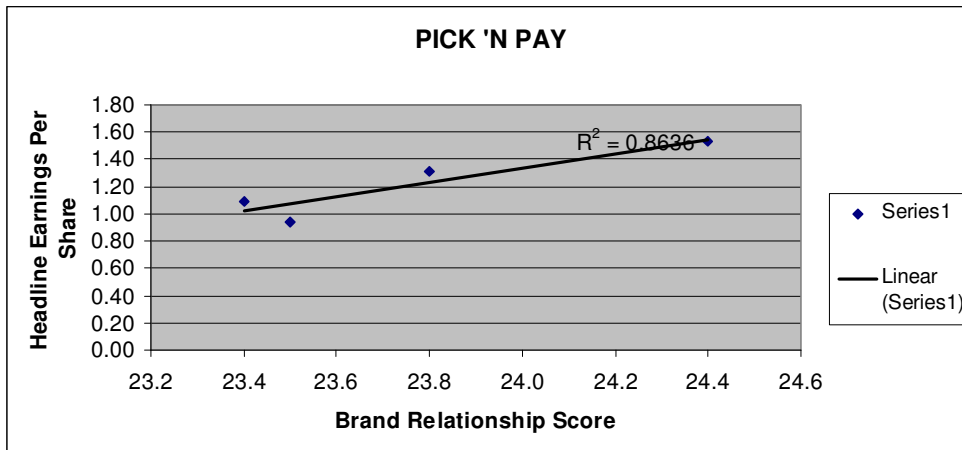
$$r = 0.91$$

The BRS and HEPS on the scatter plot appear to be increasing in the same direction, which indicates a positive relationship between the brand relationship score and HEPS for Shoprite. It is noted that Shoprite has a correlation coefficient of 0.91, which indicates a very strong linear correlation between the brand relationship score and HEPS.

Pick 'n Pay

Examination of the scatter plot indicates that the points rise from the left to the right, which seems to suggest a positive relationship between the variables under investigation.

Figure 10: Pick 'n Pay Scatter plot

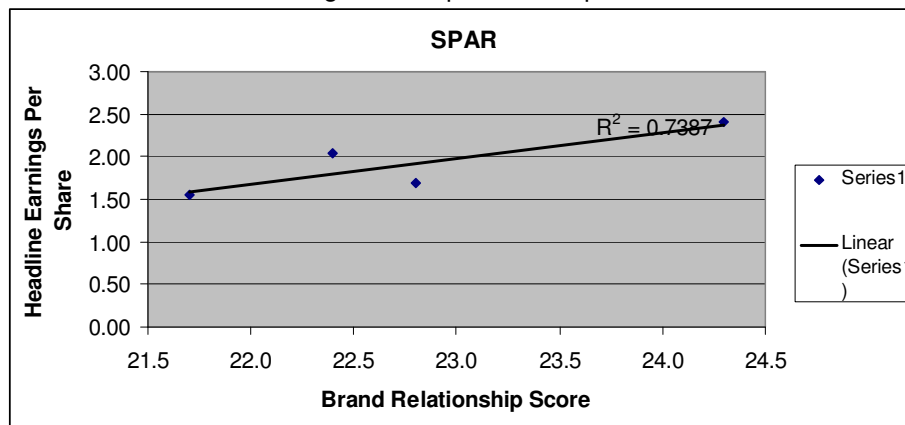


$r = 0.93$

It is noted that the Pick 'n Pay correlation coefficient of 0.93 suggests that a very strong positive linear relationship between the brand relationship score and HEPS.

Spar

Figure 11: Spar Scatter plot



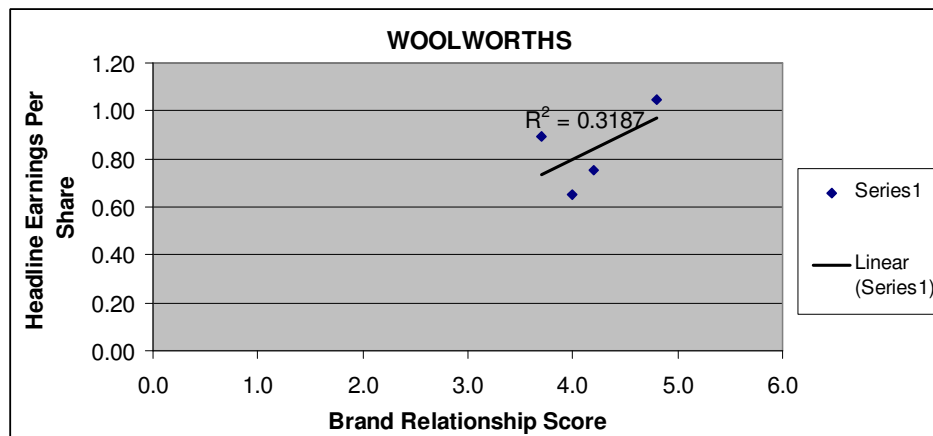
$r = 0.86$

The scatter points are rising from left to right, which suggests a positive relationship may exist between the brand relationship score and HEPS. The computed correlation coefficient is 0.86 confirms, which indicates a strong to very strong linear relationship between the brand relationship score and HEPS.

Woolworths

What is important to note is that its HEPS figure is a true reflection of Woolworths retail stores' performance and does not include other Wooltru stores like Truworths.

Figure 12: Woolworths Scatter plot



$$r = 0.57$$

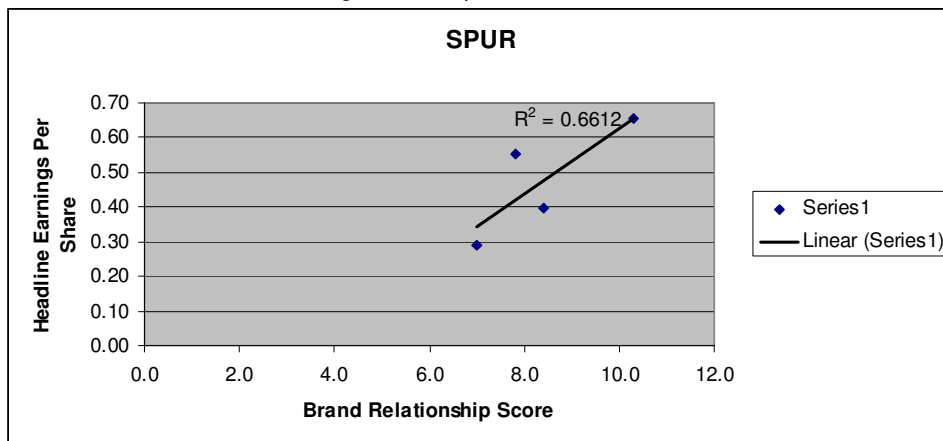
The relationship between the brand relationship score and HEPS on the scatter plot appears to be somewhat positive. It is noted that Woolies has a correlation coefficient of 0.57, which suggests a moderate linear correlation between the brand relationship score and HEPS.

Conclusion:

The results of the grocery and convenience store category suggest that there is a strong to very strong positive correlation exists between the brand relationship scores and headline earnings per share of the brands and companies analysed in this section.

5.2.2.3. Fast Food Restaurants

Figure 13: Spur Scatter Plot



$$r = 0.82$$

Spur is the only fast food and restaurant brand that was available for analysis as some of the brands are held off-shore, some local brands are not listed, e.g. Chicken Licken and Nando's and others are part of a larger group and it is, therefore, difficult to analyse their brand contribution to the HEPS, i.e. Famous Brands (Wimpy, Debonairs, etc.).

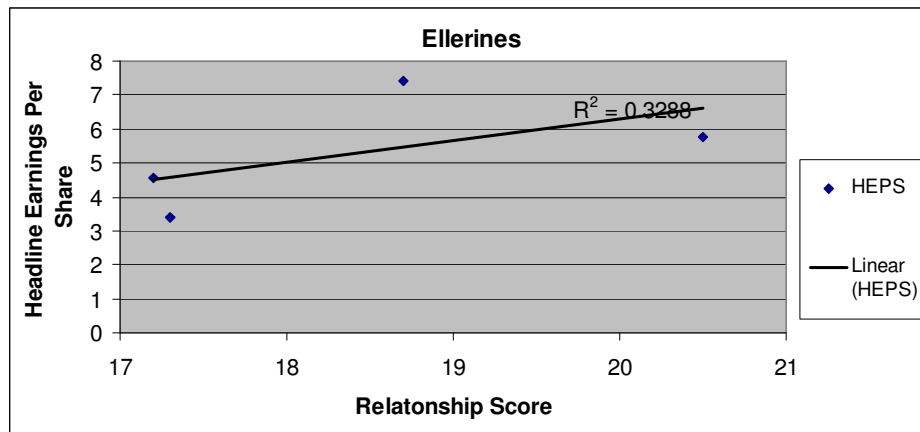
There appears to be a strong correlation between Spur's BRS and HEPS. Spur also has a correlation of 0.82 and an R^2 of 0.66, which suggests strong linearity.

5.2.2.4. Furniture Stores

3 Brands were analysed in this section, i.e. Ellerines and Joshua Doore. Lewis Stores were also investigated but the company only listed in 2005, so, there was not enough data available for trend analysis. The results for each of these brands will now be discussed.

Ellerines

Figure 14: Ellerines Scatter plot

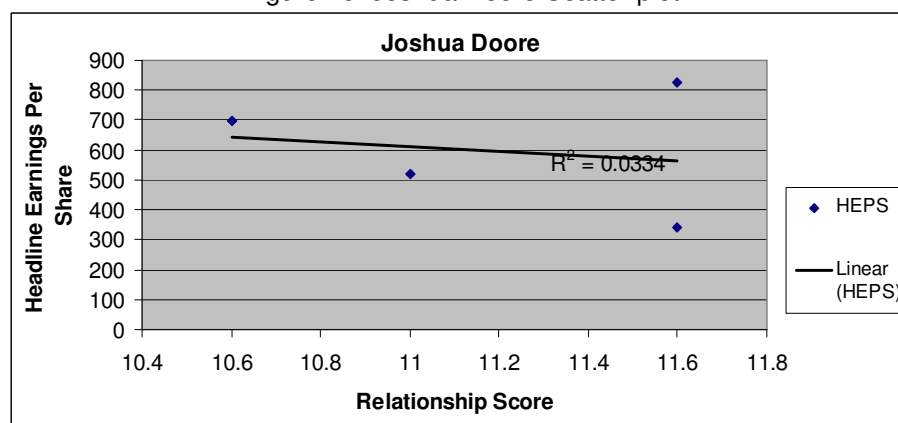


$$r = 0.57$$

The relationship between the brand relationship score and HEPS on the scatter plot appears to be somewhat positive. It is noted that Ellerines has a correlation coefficient of 0.57, which suggests a moderate linear correlation between the brand relationship score and HEPS. The R^2 value is 0.32, which suggests low linearity.

Joshua Doore

Figure 15: Joshua Doore Scatter plot



$$r = -0.18$$

The plots are scattered all over the place, which indicates a negative relationship between the variables. The correlation coefficient computed for

Joshua Doore is -0.18, which indicates that no linear relationship exists between Joshua Doore’s brand relationship score and its HEPS.

Conclusion:

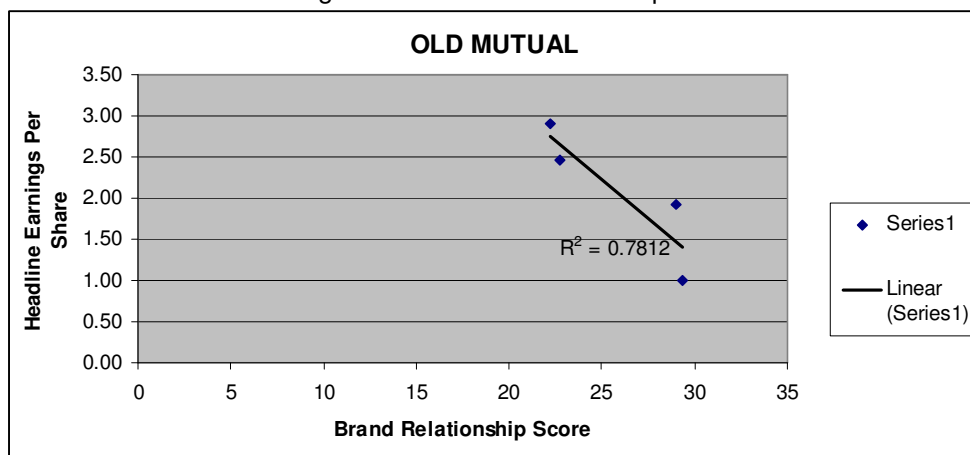
BRS and HEPS for Ellerines appear to have a weak to moderate linear correlation, while BRS and HEPS for Joshua Doore appear to have a negative correlation.

5.2.2.5. Long-term insurance

Five (5) long-term insurance sector brands were analysed, i.e. Old Mutual, Sanlam, Metropolitan, Clientele and Liberty.

Old Mutual

Figure 16: Old Mutual Scatter plot



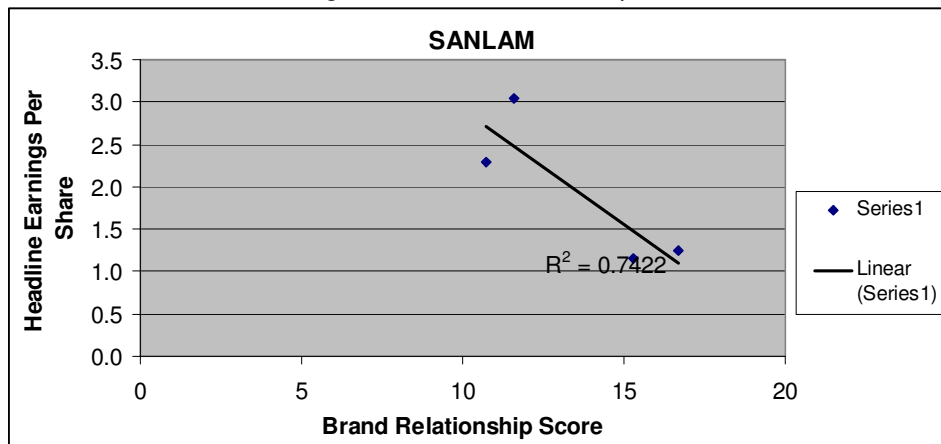
$r = -0.88$

The points on the scatter plot are sloping in a downward direction. This suggests that a negative relationship between the variables under investigation. The correlation coefficient for the variables is -0.88 with an R² value of 0.78. This suggests a strong negative relationship or that no relationship exists

whatsoever between them. The R^2 value of 0.78 indicates that a significant 78% of the variance in HEPS can be accounted for by the movement in the brand relationship score.

Sanlam

Figure 17: Sanlam Scatter plot



$$r = -0.87$$

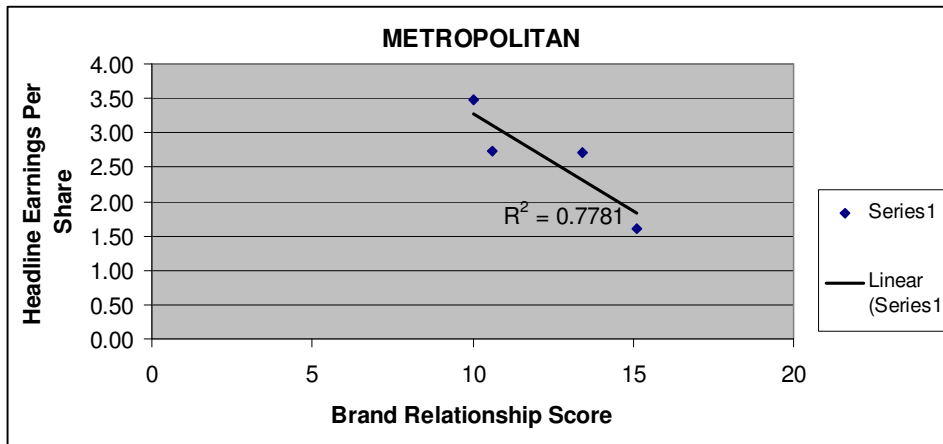
The points on the scatter plot are sloping in a downward direction. This suggests a negative relationship between the pairs. It is noted that Sanlam's correlation coefficient is -0.86, which suggests that there is no linear relationship between the brand relationship score and HEPS for Sanlam.

The R^2 value of 0.72 indicates that a significant 72% of the variance in HEPS can be accounted for by the movement in the brand relationship score.

Metropolitan Life

The points on the scatter plot are sloping in a downward direction in Metropolitan's case as well, which suggests a negative relationship between the pairs.

Figure 18: Metropolitan Scatter plot

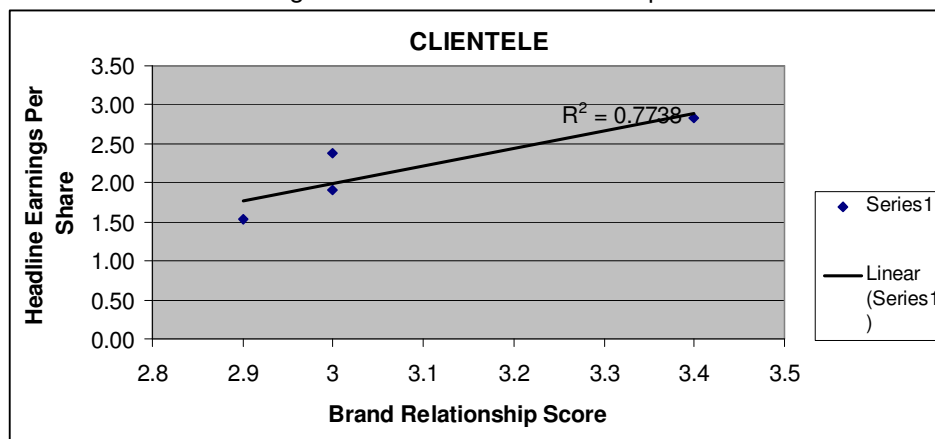


$r = -0.88$

Metropolitan's correlation coefficient is -0.88, which suggests that there is no linear relationship between the brand relationship score and HEPS for Metropolitan. An R^2 value of 0.77, signifies that 77% of the variance is accounted for by the change in the BRS.

Clientèle

Figure 19: Clientele Life Scatter plot



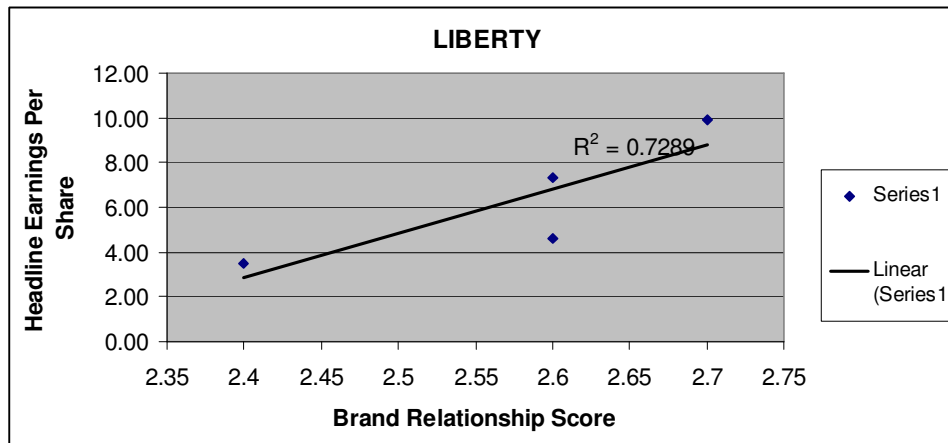
$r = 0.88$

The variables rise from left to right on the scatter plot, showing a positive relationship between them. Clientèle has a correlation coefficient of 0.88, which suggests a strong to very strong linear correlation between its brand relationship score and HEPS.

Liberty Group

Liberty's scatter plot indicates a positive relationship between the variables. It is noted that Liberty has a correlation coefficient of 0.88, which suggests a strong to very strong correlation between its brand relationship score and HEPS.

Figure 20: Liberty Scatter plot



$$r = 0.88$$

From the results presented in this section, there appears to be no relationship between the brand relationship scores and the headline earnings per share investigated.

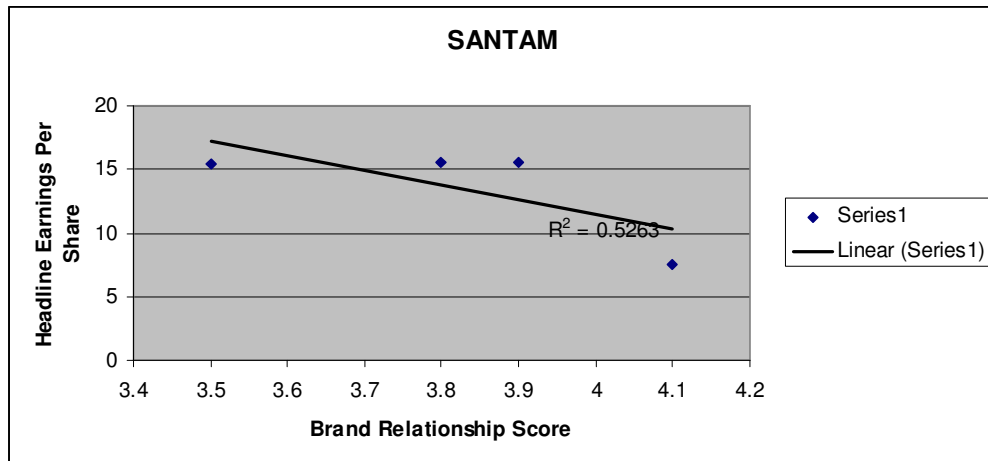
5.2.2.6. Short-term insurance

Two (2) short-term insurance sector brands were analysed, i.e. Santam and Mutual & Federal. Other brands that were also investigated were, Outsurance, Dial Direct, Auto & General but their financial data was not available, as they are not listed on the JSE.

Santam

The points on the scatter plot are sloping in a downward direction. This suggests that a negative relationship between the variables under investigation.

Figure 21: Scatter plot for Santam

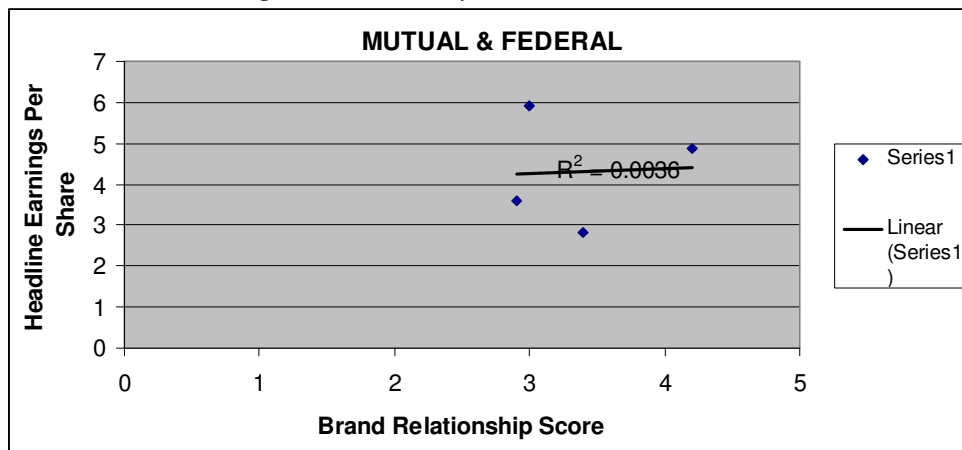


$r = -0.73$

The correlation coefficient for the variables is -0.73 with an R^2 value of 0.52. This suggests a negative relationship exists between the variables.

Mutual & Federal

Figure 22: Scatter plot for Mutual & Federal



$r = 0.06$

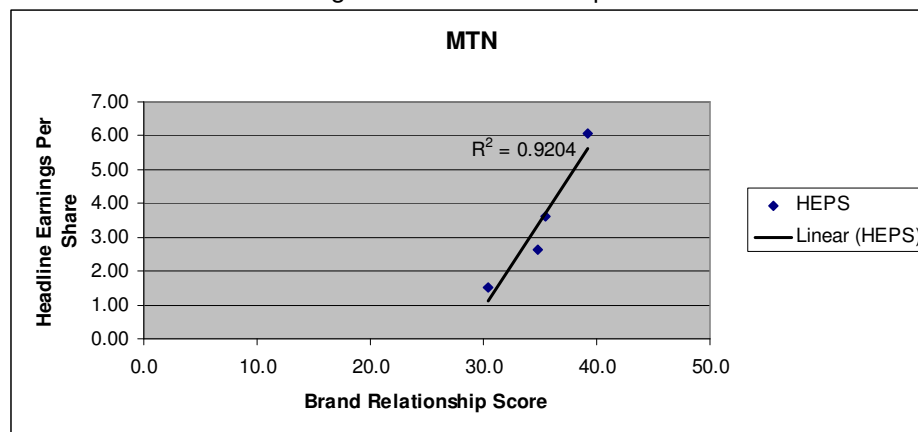
The points on the scatter plot are swarming with no apparent pattern. This suggests that there is almost no relationship between the variables under investigation. The correlation coefficient for the variables is 0.06 with an R^2 value of 0.003. This suggests a negative relationship exists between the variables.

5.2.2.7. Telecommunications Providers

Vodacom is the market leader in this category and also has the highest brand relationship score, 49.3%. Vodacom and Cell C are, however, not listed on the JSE and can, therefore, not be analysed. Virgin Mobile was launched in SA in 2006 and appears in the 2007 report. However, it can also not be analysed due to data non-availability.

MTN

Figure 23: MTN Scatter plot



$$r = 0.96$$

The near-perfect linear correlation is evident from the scatter plot.

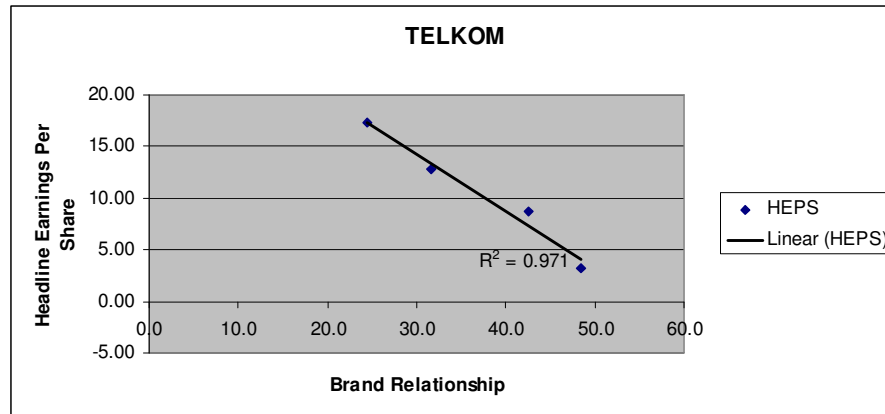
The computed correlation coefficient for MTN is 0.96, which suggests a very strong correlation between its brand relationship score and its HEPS.

MTN's R^2 is 0.92, which suggests strong linearity between the variables.

Telkom

Telkom's scatter plot indicates a near-perfect negative correlation between the variables under investigation. Telkom's correlation coefficient is -0.98, which confirms that there is no association between the two variables under discussion.

Figure 24: Telkom Scatter plot



$r = -0.98$

Telkom's R^2 value is 0.97, which suggests strong non-linearity.

Conclusion:

Results from the two companies investigated in the telecommunications sector are mixed. While the BRS and HEPS of MTN appear to have a near-perfect positive correlation, the BRS and HEPS for Telkom appear to have a near-perfect negative relationship.

5.2.3. Conclusion

A summary of the findings from this analysis are included in the table contained in the next page. The results of the regression and correlation analysis undertaken in this section indicate no correlation at market level. However, at sector level, there appears to be a positive linear correlation appears to be present in 13 out of the 21 cases, i.e. 62% of the cases. There are two particular sectors whose results are clear-cut, i.e. the long-term insurance sector and the grocery and convenience sectors and might warrant further investigation. The conclusion is, therefore, that the null hypothesis is not supported in the majority of the cases but supported in other cases.



#	Brands	<i>R</i>	<i>R</i> ²	Reject/ Fail to Reject	Comment
1	ABSA	0.73	0.53	Reject	
2	Standard Bank	-0.82	0.67	Fail to reject	
3	First National Bank	0.36	0.39	Reject	Non-linear
4	Nedbank	0.62	0.37	Reject	
5	African Bank	-0.56	0.32	Fail to reject	
6	Old Mutual	-0.88	0.78	Fail to reject	
7	Sanlam	-0.87	0.72	Fail to reject	
8	Metropolitan (Life)	-0.88	0.77	Fail to reject	
9	Clientèle	0.88	0.77	Reject	
10	Liberty	0.88	0.77	Reject	
11	Santam	-0.73	0.52	Fail to reject	
12	Mutual & Federal	0.06	0.004	Fail to reject	Insignificant
13	Shoprite	0.91	0.84	Reject	
14	Pick 'n Pay	0.93	0.86	Reject	
15	Spar	0.86	0.73	Reject	
16	Woolies	0.58	0.33	Reject	
17	Spur	0.82	0.67	Reject	
18	Ellerines	0.57	0.33	Reject	
19	Joshua Doore	-0.18	0.03	Fail to reject	
20	MTN	0.96	0.92	Reject	
21	Telkom	-0.98	0.97	Fail to reject	

Table 2: Summary of Regression & Correlation coefficients

5.3. Hypothesis 2

The null hypothesis stated that the share price of the seven identified brands would not change after the announcement of their brand valuations on the 9th May 2005. The alternative hypothesis stated that the share price of the seven identified brands would change after the announcement of their brand valuations on the 9th May 2005. A variation of the “event study” espoused by Simon and Sullivan (2003) was utilised, where share performance before and after announcement day was tracked and analysed. A total of 10 brands were valued by Interbrand in 2005. The table below contains a list of all the brands that were valued as well as their actual valuation values.

#	Brand	Sector	Brand Valuation 2005 (Rbn)
1	Standard Bank	Banking	R 10,165
2	MTN	Telecommunications	R 8,895
3	Vodacom	Telecommunications	R 6,501
4	ABSA	Banking	R 4,924
5	First National Bank	Banking	R 2,915
6	Telkom	Telecommunications	R 2,704
7	Castle Lager	FMCG	R 2,576
8	De Beers	Industrial	R 2,443
9	Old Mutual	Financial Services	R 2,366
10	Pick ‘n Pay	Food Retail	R 2,318

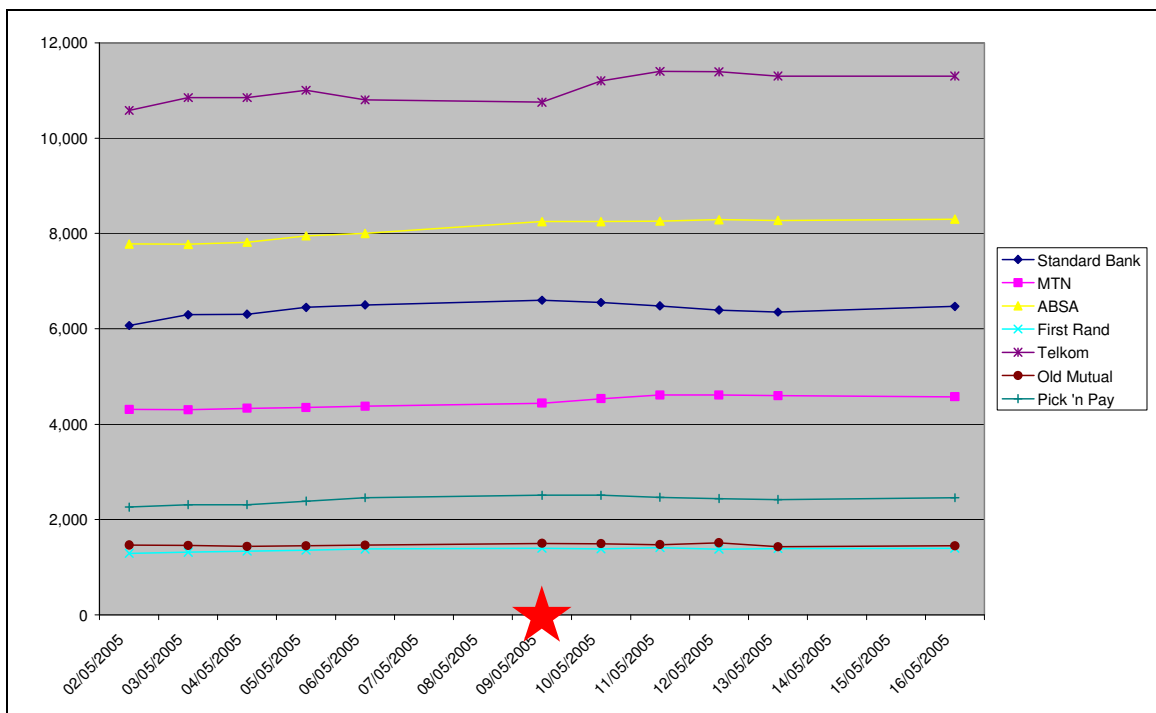
Table 3: Top 10 brands in terms of brand value
Source: Adapted from “South Africa has three billion dollar brands”, found at www.bizcommunity.com

Only seven of these brands were analysed in this study, i.e. Standard Bank, MTN, ABSA, FNB, Telkom, Old Mutual and Pick ‘n Pay. The other three brands, i.e. Vodacom, Castle Lager and De Beers, could not be analysed due to certain limitations. Vodacom does not have its own JSE listing as it is partly owned by Telkom and Vodafone (UK based). The assumption, however, is that investor confidence in Vodacom will be partly reflected in the increase in Telkom’s share

price. Castle Lager is one of the brands in the SAB Miller stable. Although SAB has a secondary listing in SA, SA is now a small element in its portfolio and SAB is now generally used by many investors on the JSE as a “Rand hedge” stock due to its exposure to the American and European markets. It seems unlikely, therefore, that any movements on the Castle brand would affect SAB Miller’s share price. De Beers is only listed in the United Kingdom; therefore, its financial data could not be obtained. The remainder of the brands have their primary listing on the JSE and their financial performance is publicly available.

The figure below depicts changes in the share prices of identified stocks 5 days before the event, i.e. 9th May 2005, and 5 days after the announcement.

Figure 25: Share Prices before and after the event



The figure above indicates that all the shares, except, Telkom, experienced some increases on the day of the announcement. Analysis of the time series

charts in the appendix as well as a manual calculation of the share movement changes revealed the following:

- The SBSA share price increased by 2% (R1) on the day, even though the share price was already on a declining trend.
- The MTN share price increased by 1%. However, the share price was already on an upward trend.
- The moving average indicates that the ABSA share was on an increasing trend at the time and the share price started declining a day after the event. It is notable that ABSA's share price increased by 3% on the day of the announcement.
- The First Rand share price increased by 1% on the day. Indications are that the share was on a downward spiral and continued this decline thereafter.
- The Telkom share price did not increase on announcement day. However, the share started climbing a day after the event.
- The Old Mutual share price increased by a significant 3% on the day of the announcement.
- The Pick 'n Pay share price increased by 2% on the day and went on a downward spiral thereafter.

To test the significance of the share price changes outlined above, an ANOVA calculation was conducted. The ANOVA compared the performance of the shares the week before the event and the week after the event. The performance of the All Share Index was also included in order to order to evaluate where these shares were performing against the rest of the market.

The table below contains the p-values from the ANOVA tests.

At a 95% significance level, a p-value of less than 0.05 indicates that the difference in share prices before and after the event is significant. When we get a p-value of less than 0.05, then we can conclude there is little chance that the true difference is zero. A p-value of 0.000 leaves no doubt that the population that there are significant differences (the means of the populations are not equal).

Share/ Brand	p
Standard Bank	0.000
MTN	0.000
ABSA	0.000
First Rand	0.000
Telkom	0.000
Old Mutual	0.500
Pick 'n Pay	0.000

Table 4: Summary of p-values

The results indicate that the Old Mutual share is the only share that did not experience significant differences after the event. This is evident in the ANOVA graphs which are far apart for most of the shares except for Old Mutual, which is overlapping. The detailed ANOVA reports are included in the [Appendix D](#).

The only conclusion that can be reached in this case is that the null hypothesis must be rejected and the alternative hypothesis accepted.

5.3.1. Concomitant Variation

The improvement of the ABSA and MTN share prices after the announcement seems to suggest that the market responded to the positive news about these brands. Zikmund (2003), however, cautions that concomitant variation tends to be associated with causal studies. Concomitant variation refers to a phenomenon where the two variables under investigation vary at the same time.

In such cases, researchers will tend to argue that there is association between variables when there is none.

In order to rule concomitant variation out of this study, SENS data was analysed to determine if there were any significant announcements that were made on the JSE on, before or just after the 9th May 2005 that may have affected the share prices of the companies under investigation, particularly the ones that reflected an increase.

Analysis of the SENS database reveals that, on the 9th May Barclays issued a notice of a firm offer to acquire a stake in ABSA. It is highly probable that this would have affected the ABSA share price in a positive way. The rationale for that is that current shareholders would have anticipated profits and bought more shares and new buyers would have bought shares in the hope of profiting from the deal, hence, the share price increase.

There were no announcements from Old Mutual prior to the 9th May. On the 11th May, they released an update on quarterly results. On the 13th, an announcement was made that they were engaged “in preliminary discussions with Scandia concerning a potential transaction”. It is possible that this might be the reason for the increase. MTN’s announcement related to their dispute about disclosure of information with Celtel. One could not find any reports of the Interbrand valuation and its significance to the investors in the SENS database

5.3.2. Conclusion

The results indicate that there were significant movements in share prices after the announcement. The findings also appear to support the alternative hypothesis, i.e. that the market will not react to news. However, as it has been established from the SENS data, it is highly likely that the shares were reacting to financial announcements rather than brand announcements. It is clear from the SENS analysis is that none of the company announcements related to brands.

CHAPTER 6: DISCUSSION OF RESULTS

6.1. Introduction

This section interprets the research findings and discusses their implications. Each discussion consists of a summation of the evidence, a statement of whether or not the null hypothesis should be rejected, and a discussion of what can be concluded from the results. The conclusion discusses whether the research objectives in chapter 1 have been met.

6.2. Hypothesis 1

At a market level, the research results appear to support the null hypothesis, i.e. there is no correlation/ relationship between the variables under investigation. The correlation coefficient is 0.069, which indicates an extremely weak correlation between the brands' relationship scores and headline earnings per share. The results further indicate that the movement in the brand relationship score can account for only 0.5% of the variance in HEPS. The regression and correlation analysis indicates that the null hypothesis be supported. On a theoretical level, this would support the assertion that brand strength would not necessarily result in increased returns for the shareholders of the company that owns the brand.

Others might argue that the correlation between brand equity and shareholder returns would be negative at market level as the different companies and brands are exposed to different market conditions. Evidence from this study appears to support the latter view. Evidence suggests that there might be differences in the relationship between brand equity and shareholder returns

between different sectors. A positive linear correlation was found to be present in 13 out of the 21 cases, i.e. 62% of the cases analysed. The different market sectors that were investigated will now be discussed in order to illustrate this point.

The results from the banking sector analysis suggest a moderate to strong correlation between the brand relationship scores of the top banks and their headline earnings per share. FNB's BRS and HEPS had a moderate correlation but the relationship was not linear. The banking sector results potentially create a link between brand equity and shareholder value. African Bank's results were a notable exception to what has been mentioned above as they showed a negative correlation between the bank's BRS and HEPS. This would suggest that either African Bank either has a captive market and the brand is less important for business growth or that the brand is simply not important to the investors. When one looks closely at African Bank's brand relationship score, one can see that it is amongst the lowest in the banking category as well as in the market. African Bank management should be concerned about such a situation as, in the long-term, brand equity is important for long-term customer loyalty (Aaker, 1991; Hofmeyr and Rice, 2000). Aaker (1991) contends that the reason brands aim to establish brand loyalty is that when a brand earns the trust and loyalty of a consumer, the consumer is likely to repeat the positive experience rather than experiment with an untested product, so, loyalty is also important for warding off future competition.

The long-term insurance sector results suggest a weak to moderate correlation between the brand relationship scores of some of the brands and their headline earnings per share. The exception in this sector is Clientele Life, which showed a moderate to strong correlation between its brand relationship score and HEPS. The other insurers in the category are established businesses with traditional business models, while Clientele is newer and has adopted a different business model, which relies heavily on brand building and TV advertising. This suggests the need for different branding strategies for different business models.

The results from the grocery and convenience store sector analysis suggest that there is a moderate to very strong correlation between the brand relationship scores and HEPS of the brands in this category. Woolworths was the only brand with a moderate correlation while the others showed strong correlations. The positive result from this was expected as retailers are key purveyors of fast moving consumer goods (FMCG) brands and brand awareness and trust are the key determinants of choice in this sector. These results appear to suggest that, for certain sectors of the market there might be a strong correlation between brand equity and shareholder return. It could also be concluded that, in one of the cases, the results appear to support the assertion by Madden *et al* (2006) were able to demonstrate that changes in brand equity are associated with changes in firm value. The research has, however, not definitively proved that this is a general rule - it only happens in some cases.

The fact that brand equity appears to be important in the retail sector bodes well for the future of brand building as retailers are the main culprits who are forcing categories towards commodity status as a result of their insistence on discounting to attract consumers. Discounting allows them to keep house-brands as well as second and third-tier brands on the supermarket shelves. However, as Aaker (1991) attests, the danger of continuous discounting is that the consumer gets used to buying on discount and starts planning their purchases around the promotion cycle, which is not good for the long-term sustainability of any business. The sooner the retailers realise that price-based competition is unsustainable, the easier it will be for business to turn their attention to brand building.

The results from the furniture retail sector were mixed, with Ellerines having a moderate relationship and Joshua Doore having a strong negative relationship between the BRS and HEPS. This result is surprising, as one would have expected the trend to be the same as in the grocery and convenience stores. One would expect the two retail stores to exhibit similar behaviour. This might suggest different consumer buying criteria for this category.

The results from the telecommunications analysis are mixed. While the MTN result indicates a strong correlation between its brand relationship score and its HEPS, the opposite is true for Telkom. This situation is understandable considering that MTN is faced with very aggressive competition and is competing in a fashion-driven sector market, while Telkom is a monopoly. Brand equity would give MTN a competitive advantage, while brand equity is

less important for Telkom – its investors get returns in spite of poor brand image. It is also interesting to note from previous Nielsen Adex data that cellphone companies are among the country's top advertisers. As such, it is not surprising that MTN's BRS has been increasing steadily, with a major jump from 2005 to 2006. It would appear, based on the actions of MTN and its competitors, that the cellphone category is the one category that has taken heed of the assertion by Keller (1991) that high levels of awareness and positive brand image increase the probability of brand choice as well as produce greater consumer loyalty.

The regression and correlation analysis looked at the relationship between the BRS and HEPS over a four-year period. Therefore, the results discussed above are reflective of a longer-term trend rather than just a short-term/ 1-year trend.

The research also indicated in many cases that HEPS continued to grow whether the BRS increased or not. This goes to show that although there is a relationship between the two variables, there is no causality, as others might be tempted to think.

6.3. Hypothesis 2

The null hypothesis stated that the share price of the seven brands identified earlier would not change after the announcement of their brand valuations on the 9th May 2005. The alternative hypothesis stated that the share price of the brands would change after the announcement of their brand valuations on the 9th May 2005. The basis for this hypothesis was the efficient-markets theory

argued by Simon and Sullivan in chapter 2. Simon and Sullivan have argued that, in a well-functioning securities market, any marketing event that affects cash flows will cause a change in estimated brand equity as soon as the event is anticipated. The aim of this test was to determine whether financial markets reacted to market reports about brands and to what extent they did so.

The results indicated that there was movement by some brands on the day of the announcement. However, post the announcement, the All Share Index growth remained unchanged. Other shares were in decline. The only significant movements were on the ABSA and Old Mutual share prices. This could, however, not be definitively linked to the announcement. The findings also appear to support the alternative hypothesis, i.e. that the market will react to market reports about brands.

It was presumed that the announcement of the brand valuations would be seen as highly significant for the marketing community as well as SA business as a whole, as it was the first time that SA brands had been officially valued. The announcement was expected to reassure current investors of future profits and encourage new investors to buy into those shares. Accountants have long been arguing for the marketing fraternity to demonstrate brand value. Sinclair (2006) argues that it is no longer just the accountants that are putting emphasis on brand value; financial analysts are also putting an emphasis on it. He further states that new corporate governance instruments like Sarbanes-Oxley now require companies to report non-financial indicators in the narrative part of their

annual reports. So, it was reasonable to expect financial markets to take note of this event and reflect it in the share prices of the valued brands.

Companies are required to inform the markets of any developments that might affect the share price. It is interesting to note that none of the companies that own the brands that were reviewed released a statement about this to the market.

The valuations story was covered in marketing as well as some mainstream media. One of the angles that was covered was the dispute about the Vodacom and MTN valuations. Vodacom is the market leader, with greater market share than MTN and yet it was valued at R6,501 billion while MTN was valued at R8,895 billion. It is interesting to note that Vodacom was also valued using the BrandMetrics methodology and its brand value was pitched at R30 bn. This kind of discrepancy results does not bode well for marketing's credibility.

This confirms the view by Motameni and Shahrokhi (1998) that the challenge for marketers wishing to use brand valuation as a means of stressing the importance of the marketing function lies in dealing with the intangibility and value judgement elements of a brand's worth.

Although the Interbrand method is a credible instrument that is now used in company financial statements and for tax purposes and is used in Sarbanes-Oxley audits, it is possible that the market did not react strongly to the brand valuations announcement because of disagreement on the acceptable value of the brands that were valued, especially after the Vodacom debacle. Keller

(1993) stresses that from a financial point of view, it is important for buyers and sellers to agree on an acceptable value for the brand.

It has been pointed out earlier that although the valuations story was covered in mainstream media, there was no indication from the SENS database that some of the valued companies had informed the markets about this developments. This goes to support the view by Davis (2002) that there is a lack of cooperation between marketing and finance in organisations in terms of measuring marketing's impact on financial performance, which makes the task even harder for marketing.

Another problem could be, it could be argued that some investors may have picked up the information and factored it into their choice and were planning to act on it at a later stage. This is part of the problem with brand-building; lag effect between the action and the results is one of the reasons why the marketing fraternity is under pressure to produce marketing metrics that will show immediate results.

6.4. Other observations from the research

There were other notable observations in the data used for the analysis. It is interesting to note that there is a definite difference in awareness and the size of the brand relationship scores for brands at the top of the list and their competitors lower down, which would indicate greater awareness as a result of greater market share. This would seem to support the view espoused by Mitchell, quoted in Chaudhuri (1995) that brand equity is a result of greater

market share because greater market share brands have greater rates of repeat buying because they have a greater number of buyers.

A further observation from the sample is that although brands like Perm, NBS and People's Bank have been out of the market for a number of years, they still have higher brand relationship scores than brands that are currently trading, e.g. Ithala, Teba Bank and African Bank. This appears to suggest that brand equity is enduring; it sometimes endures long after the brand has been discontinued. The domination of the Shoprite brands of the top brands list for the grocery and convenience sector is a further indication of the enduring nature of brand equity. The fact that when OK Bazaars was sold, it had very high brand equity and a lot of debt and was sold for R1, should serve to caution management that brand equity is not a panacea for bad business management.

6.5. Conclusion

There is growing pressure on the marketing fraternity to demonstrate the impact of brand investments on company financial performance. The main reason for embarking on this research was to assist in bridging the knowledge gap that exists locally on the subject of brand equity, brand equity measurement and brand valuations and it was hoped that this research would initiate further research into the topic. The specific research objectives that were stated in Chapter 1 were: to evaluate whether there is a relationship between strong brand equity, represented by the Markinor brand relationship score and shareholder returns, i.e. headline earnings per share (HEPS) of selected South African companies. If there was indeed a relationship, the research sought to

establish whether the relationship was positive or negative. This link was established in some cases and not in others. In order to further establish the link between brand equity and shareholder return, the research also evaluated whether capital markets respond to any brand-related information. It was established that there was some movement in the market on the day of the brand announcement. However, it could not be established whether this movement was linked to the brand announcement or not.

Overall, the study has been able to achieve the following:

- documented the theory on brand equity and how to build and maintain it,
- highlighted the brand valuation models that are available in the market,
- evaluated the various studies that have been conducted elsewhere in the world that demonstrate the link between brand equity and shareholder value
- The study has also been able to establish a relationship between brand equity and shareholder returns for some sectors of the South African market.

CHAPTER 7: CONCLUSION

7.1. Introduction

The objective of this chapter is to summarise the findings of the research and to discuss the implications of the conclusions to the relevant stakeholders. Recommendations about future research direction arising from the study's limitations as well as management action will also be made.

7.2. Summary and conclusions

The findings of this study established a relationship between brand equity and shareholder returns for some sectors but not for the market as a whole.

Although there was evidence that there was movement of the share prices of the shares under investigation, the study was unable to definitively prove that the share price movements on the days after the brand announcement were directly attributable to that particular announcement.

7.3. Recommendations for future research

Based on the outcome of this study, the following recommendations are made:

- The findings from hypothesis 2 lead one to believe that the financial markets in developing countries like SA are only receptive and reactive to financial information like mergers and acquisitions and are not excited by branding information, even though it has long been believed that brands contribute to shareholder value, while developed markets like the United States put a lot of emphasis on brands and their financial markets react to brand information. This hypothesis needs to be tested in research.

- There is a need to conduct additional quantitative research across some of the industries analysed in the research e.g. banking, grocery and convenience, in order to thoroughly understand whether the reasons for the existence or non-existence of correlation between brand equity and key shareholder value and what can be done to improve the link.
- Research should also be conducted into the impact of marketing initiatives like advertising and sponsorships on capital markets.

7.4. Recommendations to Management

The literature review as well as the research findings suggest that management can do the following in order to build, maintain and leverage brand equity:

- Organisations establish whether their brands have equity or not, what their strengths and weaknesses are and what needs to be done to build or maintain the equity. This would involve understanding of issues like brand awareness, brand attributes, loyalty levels, brand-price relationship, etc., as they relate to their brands.
- Each brand-owning company should be able to develop its own inexpensive brand equity scorecard that will measure brand equity, financial performance and satisfy some of the criteria laid down by Ailawadi *et al* (2003). This is above is important for improving marketing's productivity and ensuring that the marketing budget is appropriately spent on activities that will contribute to value creation.
- Organisations need to conduct brand valuations, at least once every five years. If SA firms are going to spend so much money on brand building, they need to understand where their brands are valued relative to the

competition. They also need to know whether their spend creates any value and whether this value appreciates or depreciates over time. Two brand valuation methods are available in South Africa, the Interbrand and BrandMetrics methods, both of which incorporate consumer-based brand equity and financial market indicators.

- Organisations need to understand the relationship between the brand's equity and shareholder returns. Is the relationship positive or negative? Is there a linear correlation? What can be done to ensure that the relationship remains positive?
- Finally, marketers would do well to start familiarising themselves with the financial aspects of business, so as to be able to bridge the gap that exists between marketing and finance.

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APPENDICES

APPENDIX A: BRAND RELATIONSHIP SCORES & HEPS

All Brands				
		<u>YEARS</u>	<u>BRS</u>	<u>HEPS</u>
1	ABSA	2003	33.5	5.28
		2004	37.7	6.89
		2005	34.7	9.55
		2006	41.3	11.82
2	Standard Bank	2003	41.1	4.71
		2004	41.5	5.70
		2005	39.5	7.02
		2006	39.7	8.37
3	First National Bank	2003	30.7	0.93
		2004	32.3	1.1
		2005	29.5	1.29
		2006	32.7	1.58
4	Nedbank	2003	7.7	0.19
		2004	8.2	4.83
		2005	7.0	7.97
		2006	11.5	11.10
5	African Bank	2003	2.3	1.40
		2004	2.8	1.62
		2005	1.0	2.02
		2006	2.0	2.23
6	Ellerines	2003	17.3	3.40
		2004	17.2	4.57
		2005	20.5	5.76
		2006	18.7	7.42
7	Joshua Doore	2003	11.6	3.41
		2004	11.0	5.19
		2005	10.6	6.98
		2006	11.6	8.24
8	Pick 'n Pay	2003	23.5	0.95
		2004	23.4	1.09
		2005	23.8	1.31
		2006	24.4	1.53
9	Shoprite	2003	18.7	0.56
		2004	20.5	0.81
		2005	23.2	1.32
		2006	29.0	1.47
10	Spar	2003	21.7	1.54
		2004	22.8	1.68
		2005	22.4	2.04
		2006	24.3	2.40
11	Woolworths	2003	4.0	0.65
		2004	4.2	0.76
		2005	3.7	0.89
		2006	4.8	1.05
12	MTN	2003	30.4	1.51
		2004	34.8	2.64
		2005	35.5	3.60
		2006	39.2	6.07



			BRS	HEPS
13	Telkom	2003	48.4	3.14
		2004	42.5	8.75
		2005	31.7	12.79
		2006	24.4	17.29
14	Old Mutual	2003	29.3	0.99
		2004	29.0	1.92
		2005	22.2	2.91
		2006	22.7	2.46
15	Sanlam	2003	16.7	1.2
		2004	15.3	1.2
		2005	10.7	2.3
		2006	11.6	3.0
16	Metropolitan (Life)	2003	15.1	1.61
		2004	13.4	2.72
		2005	10.6	2.73
		2006	10.0	3.48
17	Clientele	2003	2.9	1.52
		2004	3.0	1.90
		2005	3.0	2.38
		2006	3.4	2.84
18	Liberty (Life/ Group)	2003	2.4	3.46
		2004	2.6	4.60
		2005	2.6	7.31
		2006	2.7	9.90
19	Spur	2003	7	0.29
		2004	8.4	0.40
		2005	7.8	0.55
		2006	10.3	0.66
20	Santam	2003	4.1	7.51
		2004	3.9	15.48
		2005	3.5	15.40
		2006	3.8	15.55
21	Mutual & Federal	2003	3.4	2.83
		2004	4.2	4.86
		2005	3	5.92
		2006	2.9	3.61
	Mean		17.48	4.17
	Median		15.20	2.72
	Mode		11.60	#N/A
	Minimum		1.00	0.19
	Maximum		48.40	17.29

APPENDIX B: LINEAR REGRESSION & CORRELATION COMPUTATIONS

ALL BRANDS

Data Summary_T

$$i\sum X = 1468 \quad i\sum X^2_i = 39911.12$$

$$i\sum Y = 349.9 \quad i\sum Y^2_i = 2748.963$$

$$i\sum XY = 6409.378$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.069	0.005	0.021	3.8045	3.9592

t	df	P	one-tailed	0.2676
			two-tailed	0.5351
0.623	82			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.147	0.279
0.99	-0.213	0.341

Values entered:

Pairs	X	Y	Residuals
1	33.5	5.28	0.784
2	37.7	6.89	2.307
3	34.7	9.55	5.029
4	41.3	11.82	7.162
5	41.1	4.71	0.057
6	41.5	5.70	1.038
7	39.5	7.02	2.4
8	39.7	8.37	3.745
9	30.7	0.93	-3.509
10	32.3	1.1	-3.372
11	29.5	1.29	-3.124
12	32.7	1.58	-2.9
13	7.7	0.19	-3.774
14	8.2	4.83	0.856
15	7	7.97	4.021
16	11.5	11.10	7.058
17	2.3	1.40	-2.452
18	2.8	1.62	-2.242
19	1	2.02	-1.805
20	2	2.23	-1.616
21	17.3	3.40	-0.762
22	17.2	4.57	0.41
23	20.5	5.76	1.532
24	18.7	7.42	3.229
25	11.6	3.41	-0.634
26	11	5.19	1.158
27	10.6	6.98	2.957
28	11.6	8.24	4.196



29	23.5	0.95	-3.34
30	23.4	1.09	-3.198
31	23.8	1.31	-2.986
32	24.4	1.53	-2.778
33	18.7	0.56	-3.631
34	20.5	0.81	-3.418
35	23.2	1.32	-2.964
36	29	1.47	-2.934
37	21.7	1.54	-2.713
38	22.8	1.68	-2.595
39	22.4	2.04	-2.227
40	24.3	2.40	-1.906
41	4	0.65	-3.237
42	4.2	0.76	-3.131
43	3.7	0.89	-2.991
44	4.8	1.05	-2.854
45	30.4	1.51	-2.922
46	34.8	2.64	-1.883
47	35.5	3.60	-0.938
48	39.2	6.07	1.456
49	48.4	3.14	-1.664
50	42.5	8.75	4.068
51	31.7	12.79	8.331
52	24.4	17.29	12.982
53	29.3	0.99	-3.42
54	29	1.92	-2.484
55	22.2	2.91	-1.353
56	22.7	2.46	-1.813
57	16.7	1.2	-2.949
58	15.3	1.2	-2.921
59	10.7	2.3	-1.726
60	11.6	3.0	-1.044
61	15.1	1.61	-2.506
62	13.4	2.72	-1.361
63	10.6	2.73	-1.293
64	10	3.48	-0.531
65	2.9	1.52	-2.344
66	3	1.90	-1.966
67	3	2.38	-1.486
68	3.4	2.84	-1.035
69	2.4	3.46	-0.394
70	2.6	4.60	0.742
71	2.6	7.31	3.452
72	2.7	9.90	6.04
73	7	0.29	-3.659
74	8.4	0.40	-3.578
75	7.8	0.55	-3.416
76	10.3	0.66	-3.357
77	4.1	7.51	3.621
78	3.9	15.48	11.595
79	3.5	15.40	11.523
80	3.8	15.55	11.667
81	3.4	2.83	-1.045
82	4.2	4.86	0.969
83	3	5.92	2.054
84	2.9	3.61	-0.254



ABSA

Linear correlation and Regression

Data Summary

$$\begin{aligned} \sum X &= 147.2 & \sum X^2 &= 5453.32 \\ \sum Y &= 33.54 & \sum Y^2 &= 306.2654 \\ & & \sum XY &= 1256.184 \end{aligned}$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
-0.818	0.669	-1.304	59.2109	1.1213

t	df
1.494	2

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.726	0.528	0.603	-13.7922	2.4318

P	one-tailed	0.1369
	two-tailed	0.2737

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.777	0.993
0.99	-0.929	0.998

Values entered:

Pairs	X	Y	Residuals
1	33.5	5.28	-1.116
2	37.7	6.89	-2.037
3	34.7	9.55	2.431
4	41.3	11.82	0.723

STANDARD BANK

Linear correlation and Regression

Data Summary

$$\begin{aligned} \sum X &= 161.8 & \sum X^2 &= 6547.8 \\ \sum Y &= 25.8 & \sum Y^2 &= 174.0114 \\ \sum XY &= 1039.71 \end{aligned}$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
-0.818	0.669	-1.304	59.2109	1.1213

t	df	P	one-tailed	0.091
			two-tailed	0.1819
-2.012	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.996	0.669
0.99	-0.998	0.89

Values entered:

Pairs	X	Y	Residuals
1	41.1	4.71	-0.892
2	41.5	5.70	0.62
3	39.5	7.02	-0.669
4	39.7	8.37	0.942



FIRST NATIONAL BANK
Linear correlation and Regression

Data Summary

$$\begin{aligned} \sum X &= 34.4 & \sum X^2 &= 307.78 \\ \sum Y &= 24.09 & \sum Y^2 &= 210.0959 \\ \sum XY &= 224.509 \end{aligned}$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.622	0.387	1.452	-6.4633	4.4635

t	df	P	one-tailed	0.1889
			two-tailed	0.3778
1.124	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.843	0.99
0.99	-0.951	0.997

Values entered:

Pairs	X	Y	Residuals
1	7.7	0.19	-4.526
2	8.2	4.83	-0.612
3	7	7.97	4.27
4	11.5	11.10	0.867

NEDBANK
Linear correlation and Regression

Data Summary

$$\begin{aligned} \sum X &= 24.09 & \sum X^2 &= 210.0959 \\ \sum Y &= 34.4 & \sum Y^2 &= 307.78 \\ \sum XY &= 224.509 \end{aligned}$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.622	0.387	0.267	6.9942	1.9128

t	df
1.124	2

0.622	0.387	0.267	6.9942	1.9128
-------	-------	-------	--------	--------

P	one-tailed	0.1889
	two-tailed	0.3778

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.843	0.99
0.99	-0.951	0.997

Values entered:

Pairs	X	Y	Residuals
1	0.19	7.7	0.655
2	4.83	8.2	-0.082
3	7.97	7	-2.119
4	11.10	11.5	1.546



AFRICAN BANK

Linear correlation and Regression

Data Summary

$$\sum X = 8.1 \quad \sum X^2 = 18.13$$

$$\sum Y = 7.27 \quad \sum Y^2 = 13.6377$$

$$\sum XY = 14.236$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
-0.567	0.322	-0.281	2.3869	0.3794

t	df	P	one-tailed	0.2164
			two-tailed	0.4327
-0.974	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.989	0.866
0.99	-0.996	0.958

Values entered:

Pairs	X	Y	Residuals
1	2.3	1.40	-0.34
2	2.8	1.62	0.02
3	1	2.02	-0.086
4	2	2.23	0.405



SHOPRITE

Linear correlation and Regression

Data Summary:

$$\begin{aligned} \sum X &= 91.4 & \sum X_i^2 &= 2149.18 \\ \sum Y &= 4.16 & \sum Y_i^2 &= 4.873 \\ \sum XY &= 100.331 \end{aligned}$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.916	0.839	0.087	-0.9461	0.2099

t	df	P	one-tailed	0.042
			two-tailed	0.0841
3.226	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.376	0.998
0.99	-0.766	1

Values entered:

Pairs	X	Y	Residuals
1	18.7	0.56	-0.119
2	20.5	0.81	-0.026
3	23.2	1.32	0.25
4	29	1.47	-0.105

PICK 'N PAY

Linear correlation and Regression

Data Summary

$$\begin{aligned} \sum X &= 95.1 & \sum X_i^2 &= 2261.61 \\ \sum Y &= 4.88 & \sum Y_i^2 &= 6.1476 \\ \sum XY &= 116.341 \end{aligned}$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.929	0.863	0.525	-11.2643	0.1151

t	df	P	one-tailed	0.0354
			two-tailed	0.0708
3.556	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.299	0.998
0.99	-0.728	1

Values entered:

Pairs	X	Y	Residuals
1	23.5	0.95	-0.126
2	23.4	1.09	0.067
3	23.8	1.31	0.077
4	24.4	1.53	-0.018



SPAR

Linear correlation and Regression

Data Summary_T

$$i\sum X = 7.66 \quad i\sum X_i^2 = 15.1156$$

$$i\sum Y = 91.2 \quad i\sum Y_i^2 = 2082.98$$

$$i\sum XY = 175.738$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.857	0.735	2.44	18.1272	0.6929

t	df	P	one-tailed
			0.0714
2.354	2		two-tailed
			0.1428

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.59	0.996
0.99	-0.86	1

Values entered:

Pairs	X	Y	Residuals
1	1.54	21.7	-0.185
2	1.68	22.8	0.573
3	2.04	22.4	-0.705
4	2.40	24.3	0.317

WOOLIES

Linear correlation and Regression

Data Summary_T

$$i\sum X = 3.35 \quad i\sum X_i^2 = 2.8947$$

$$i\sum Y = 16.7 \quad i\sum Y_i^2 = 70.37$$

$$i\sum XY = 14.125$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.578	0.334	1.558	2.8704	0.4644

t	df	P	one-tailed
			0.2112
1.001	2		two-tailed
			0.4223

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.861	0.989
0.99	-0.957	0.996

Values entered:

Pairs	X	Y	Residuals
1	0.65	4	0.117
2	0.76	4.2	0.146
3	0.89	3.7	-0.557
4	1.05	4.8	0.294



SPUR

Linear correlation and Regression

Data Summary_T

$$\sum_i X = 1.9 \quad \sum_i X^2 = 0.9822$$

$$\sum_i Y = 33.5 \quad \sum_i Y^2 = 286.49$$

$$\sum_i XY = 16.478$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.823	0.677	7.095	5.0047	0.9785

t	df	P	one-tailed	0.0887
			two-tailed	0.1773
2.047	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.66	0.996
0.99	-0.887	0.998

Values entered:

Pairs	X	Y	Residuals
1	0.29	7	-0.062
2	0.40	8.4	0.557
3	0.55	7.8	-1.107
4	0.66	10.3	0.612



ELLERINES

Linear correlation and Regression

Data Summary:

$$\begin{aligned} \sum X &= 73.7 & \sum X_i^2 &= 1365.07 \\ \sum Y &= 21.15 & \sum Y_i^2 &= 120.6789 \\ \sum XY &= 394.258 \end{aligned}$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.575	0.33	0.639	-6.4912	1.7215

t	df	P	one-tailed	0.2127
			two-tailed	0.4254
0.993	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.863	0.989
0.99	-0.957	0.996

Values entered:

Pairs	X	Y	Residuals
1	17.3	3.40	-1.168
2	17.2	4.57	0.066
3	20.5	5.76	-0.854
4	18.7	7.42	1.957

JOSHUA DOORE

Linear correlation and Regression

Data Summary_r

$$\begin{aligned} \sum X &= 23.82 & \sum X_i^2 &= 155.1822 \\ \sum Y &= 44.8 & \sum Y_i^2 &= 502.48 \\ \sum XY &= 266.218 \end{aligned}$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.183	0.033	0.042	11.4528	0.5899

t	df	P	one-tailed	0.4087
			two-tailed	0.8173
-0.263	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.972	0.944
0.99	-0.992	0.983

Values entered:

Pairs	X	Y	Residuals
1	3.41	11.6	0.292
2	5.19	11	-0.232
3	6.98	10.6	-0.556
4	8.24	11.6	0.497



MTN

Linear correlation and Regression

Data Summary_T

$$\sum X = 13.82 \quad \sum X_i^2 = 59.0546$$

$$\sum Y = 139.9 \quad \sum Y_i^2 = 4932.09$$

$$\sum XY = 503.52$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.959	0.92	1.784	28.8129	1.2493

t	df	P	one-tailed	0.0204
			two-tailed	0.0408
4.8	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.026	1
0.99	-0.566	1

Values entered:

Pairs	X	Y	Residuals
1	1.51	30.4	-1.106
2	2.64	34.8	1.279
3	3.60	35.5	0.266
4	6.07	39.2	-0.439

TELKOM

Linear correlation and Regression

Data Summary_T

$$\sum X = 41.97 \quad \sum X_i^2 = 548.9503$$

$$\sum Y = 147 \quad \sum Y_i^2 = 5749.06$$

$$\sum XY = 1351.17$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.985	0.971	1.761	55.229	2.2391

t	df	P	one-tailed	0.0073
			two-tailed	0.0146
-8.196	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-1	-0.449
0.99	-1	0.132

Values entered:

Pairs	X	Y	Residuals
1	3.14	48.4	-1.299
2	8.75	42.5	2.681
3	12.79	31.7	-1.004
4	17.29	24.4	-0.378



OLD MUTUAL

Linear correlation and Regression

Data Summary_T

$$\sum X = 8.28 \quad \sum X^2 = 19.1862$$

$$\sum Y = 103.2 \quad \sum Y^2 = 2707.62$$

$$\sum XY = 205.131$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
-0.884	0.782	-4.15	34.3901	2.2154

t	df	P	one-tailed	0.0578
			two-tailed	0.1156
-2.68	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.997	0.512
0.99	-1	0.828

Values entered:

Pairs	X	Y	Residuals
1	0.99	29.3	-0.982
2	1.92	29	2.578
3	2.91	22.2	-0.114
4	2.46	22.7	-1.482

SANLAM

Linear correlation and Regression

Data Summary_T

$$\sum X = 7.7 \quad \sum X^2 = 17.17$$

$$\sum Y = 54.3 \quad \sum Y^2 = 762.03$$

$$\sum XY = 97.81$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
-0.878	0.772	-2.862	19.0835	1.686

t	df	P	one-tailed	0.0608
			two-tailed	0.1215
-2.6	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.997	0.532
0.99	-1	0.836

Values entered:

Pairs	X	Y	Residuals
1	1.2	16.7	1.05
2	1.2	15.3	-0.35
3	2.3	10.7	-1.802
4	3	11.6	1.101



METROPOLITAN

Linear correlation and Regression

Data Summary_T

$$i\sum X = 10.54 \quad | \sum X_i^2 = 29.5538$$

$$i\sum Y = 49.1 \quad | \sum Y_i^2 = 619.93$$

$$i\sum XY = 124.497$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.881	0.777	2.741	19.4976	1.3869

t	df	P	one-tailed	0.0594
			two-tailed	0.1187
-2.637	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.997	0.522
0.99	-1	0.832

Values entered:

Pairs	X	Y	Residuals
1	1.61	15.1	0.015
2	2.72	13.4	1.358
3	2.73	10.6	-1.415
4	3.48	10	0.041

CLIENTELE

Linear correlation and Regression

Data Summary_T

$$i\sum X = 8.64 \quad | \sum X_i^2 = 19.6504$$

$$i\sum Y = 12.3 \quad | \sum Y_i^2 = 37.97$$

$$i\sum XY = 26.904$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.88	0.775	0.34	2.3404	0.1289

t	df	P	one-tailed	0.0599
			two-tailed	0.1198
2.622	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.525	0.997
0.99	-0.833	1

Values entered:

Pairs	X	Y	Residuals
1	1.52	2.9	0.043
2	1.90	3.0	0.013
3	2.38	3.0	-0.15
4	2.84	3.4	0.094



LIBERTY LIFE

Linear correlation and Regression

Data Summary_T

$$\sum X = 24.856 \quad \sum X^2_i = 181.8842$$

$$\sum Y = 10.3 \quad \sum Y^2_i = 26.57$$

$$\sum XY = 65.0064$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.878	0.771	0.037	2.348	0.0738

t	df	P	one-tailed	0.061
			two-tailed	0.122
2.594	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.532	0.997
0.99	-0.836	1

Values entered:

Pairs	X	Y	Residuals
1	3.046	2.4	-0.059
2	4.60	2.6	0.084
3	7.31	2.6	-0.015
4	9.90	2.7	-0.01



SANTAM
Linear correlation and Regression

Data Summary_T

$$\begin{aligned} \sum X &= 15.3 & \sum X_i^2 &= 58.71 \\ \sum Y &= 53.94 & \sum Y_i^2 &= 774.993 \\ \sum XY &= 204.153 \end{aligned}$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
-0.725	0.526	-11.56	57.702	3.3583

t	df	P	one-tailed	0.1373
			two-tailed	0.2746
-1.491	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.993	0.778
0.99	-0.998	0.929

Values entered:

Pairs	X	Y	Residuals
1	4.1	7.51	-2.796
2	3.9	15.48	2.862
3	3.5	15.40	-1.842
4	3.8	15.55	1.776

MUTUAL & FEDERAL
Linear correlation and Regression

Data Summary_T

$$\begin{aligned} \sum X &= 13.5 & \sum X_i^2 &= 46.61 \\ \sum Y &= 17.22 & \sum Y_i^2 &= 79.707 \\ \sum XY &= 58.263 \end{aligned}$$

r	r ²	Slope	Y Intercept	Std. Err. of Estimate
0.06	0.004	0.139	3.8362	1.6665

t	df	P	one-tailed	0.4699
			two-tailed	0.9398
0.085	2			

0.95 and 0.99 Confidence Intervals of rho

	Lower Limit	Upper Limit
0.95	-0.956	0.965
0.99	-0.987	0.989

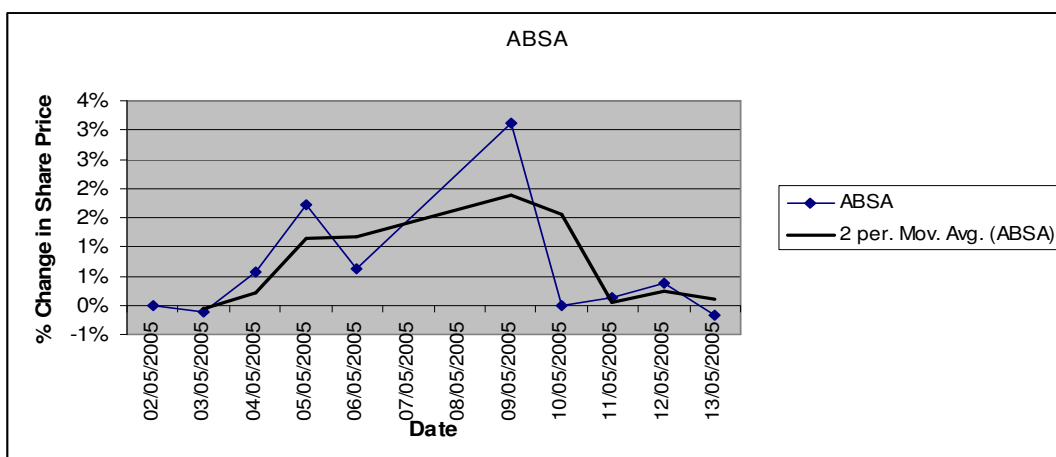
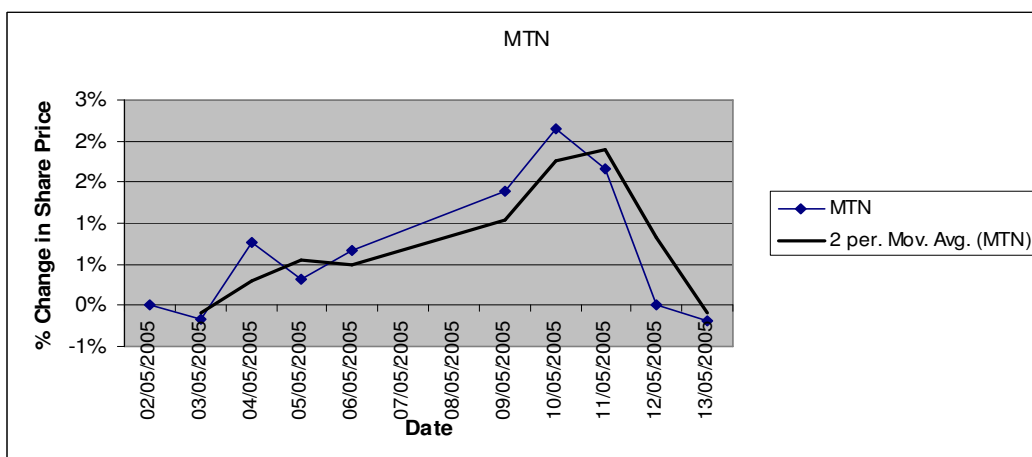
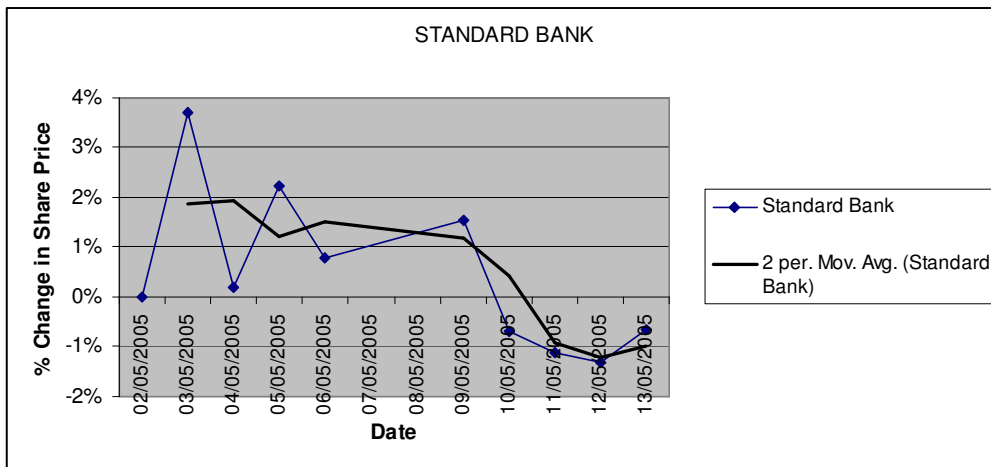
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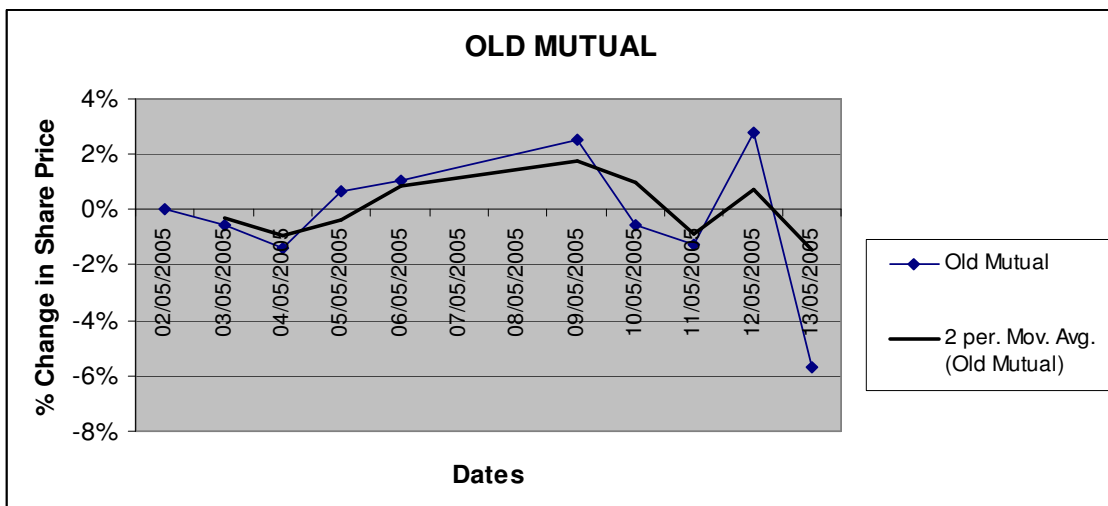
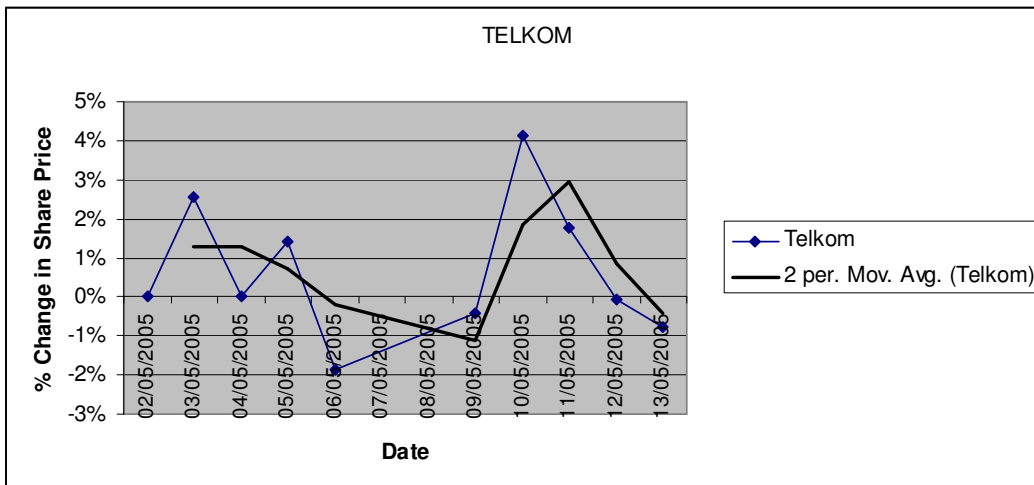
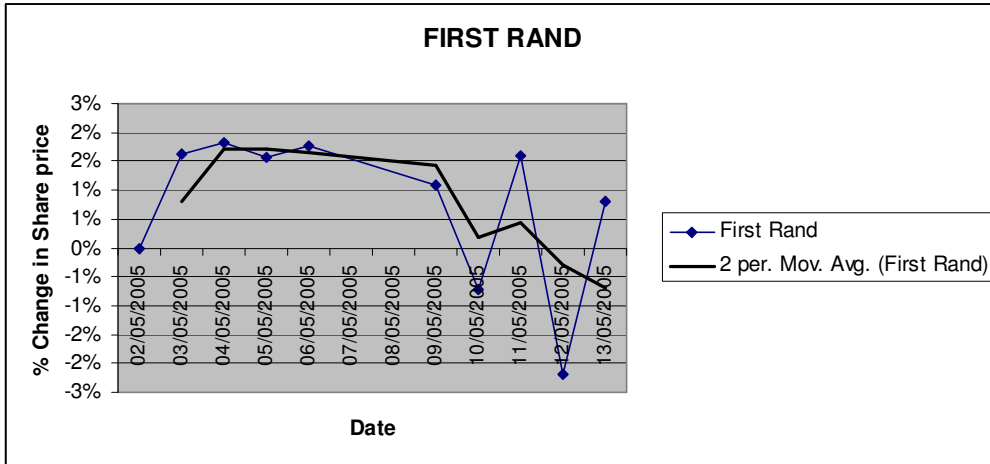
Pairs	X	Y	Residuals
1	3.4	2.83	-1.478
2	4.2	4.86	0.44
3	3	5.92	1.667
4	2.9	3.61	-0.629

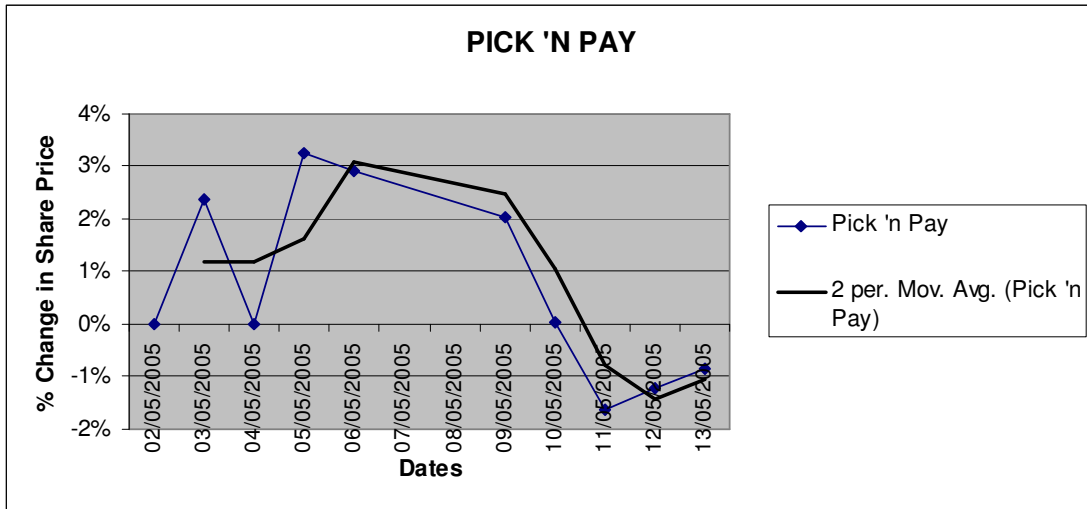
APPENDIX C: SHARE PRICE CHANGES BEFORE & AFTER EVENT

Date	02-May	03-May	04-May	05-May	06-May	09-May	10-May	11-May	12-May	13-May
Standard Bank	6,073	6,298	6,310	6,450	6,501	6,601	6,555	6,481	6,395	6,353
	0	225	12	140	51	100	-46	-74	-86	-42
	0%	4%	0%	2%	1%	2%	-1%	-1%	-1%	-1%
MTN	4,310	4,303	4,336	4,350	4,379	4,440	4,535	4,610	4,610	4,601
	0	-7	33	14	29	61	95	75	0	-9
	0%	0%	1%	0%	1%	1%	2%	2%	0%	0%
ABSA	7,780	7,770	7,815	7,950	8,000	8,250	8,250	8,260	8,290	8,275
	0	-10	45	135	50	250	0	10	30	-15
	0%	0%	1%	2%	1%	3%	0%	0%	0%	0%
First Rand	1,295	1,316	1,340	1,361	1,385	1,400	1,390	1,412	1,381	1,392
	0	21	24	21	24	15	-10	22	-31	11
	0%	2%	2%	2%	2%	1%	-1%	2%	-2%	1%
Telkom	10,580	10,850	10,850	11,005	10,801	10,755	11,200	11,400	11,390	11,300
	0	270	0	155	-204	-46	445	200	-10	-90
	0%	3%	0%	1%	-2%	0%	4%	2%	0%	-1%
Old Mutual	1,468	1,460	1,440	1,450	1,465	1,502	1,494	1,475	1,516	1,430
	0	-8	-20	10	15	37	-8	-19	41	-86
	0%	-1%	-1%	1%	1%	3%	-1%	-1%	3%	-6%
Pick 'n Pay	2,261	2,315	2,315	2,390	2,460	2,510	2,511	2,470	2,440	2,419
	0	54	0	75	70	50	1	-41	-30	-21
	0%	2%	0%	3%	3%	2%	0%	-2%	-1%	-1%

APPENDIX D: TIME SERIES CHARTS FOR THE TOP 7 BRANDS







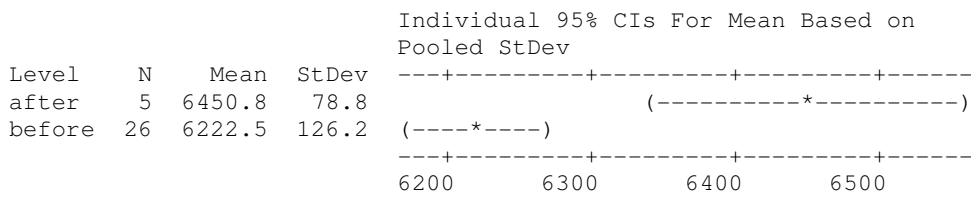
APPENDIX E: ONE-WAY ANOVA WORKSHEETS

Results for: Worksheet 1

One-way ANOVA: Standard Bank versus B/A

Source	DF	SS	MS	F	P
B/A	1	218571	218571	14.98	0.001
Error	29	423205	14593		
Total	30	641777			

S = 120.8 R-Sq = 34.06% R-Sq(adj) = 31.78%

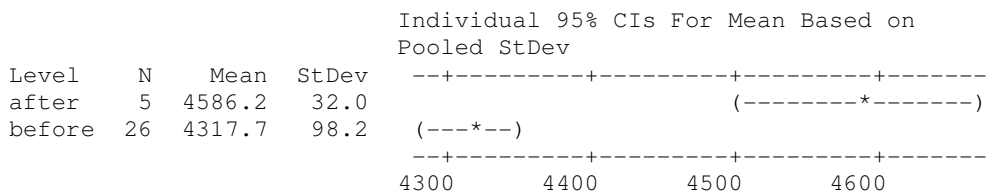


Pooled StDev = 120.8

One-way ANOVA: MTN versus B/A

Source	DF	SS	MS	F	P
B/A	1	302340	302340	35.73	0.000
Error	29	245396	8462		
Total	30	547736			

S = 91.99 R-Sq = 55.20% R-Sq(adj) = 53.65%

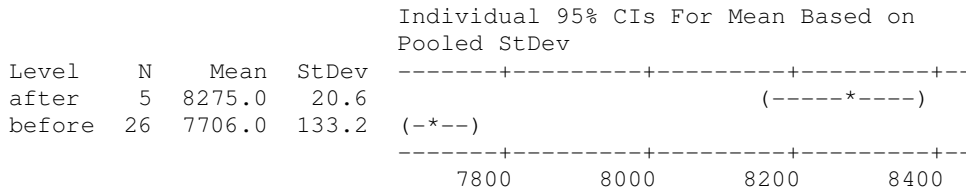


Pooled StDev = 92.0

One-way ANOVA: ABSA versus B/A

Source	DF	SS	MS	F	P
B/A	1	1357891	1357891	88.49	0.000
Error	29	444987	15344		
Total	30	1802878			

S = 123.9 R-Sq = 75.32% R-Sq(adj) = 74.47%

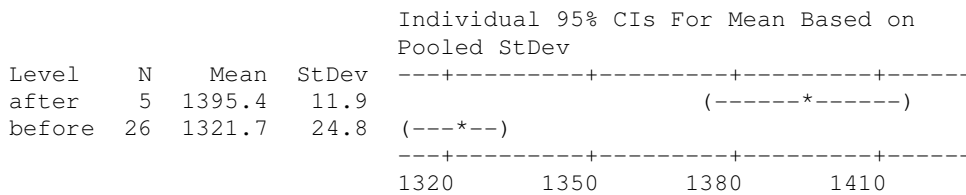


Pooled StDev = 123.9

One-way ANOVA: First Rand versus B/A

Source	DF	SS	MS	F	P
B/A	1	22783	22783	41.29	0.000
Error	29	16001	552		
Total	30	38784			

S = 23.49 R-Sq = 58.74% R-Sq(adj) = 57.32%

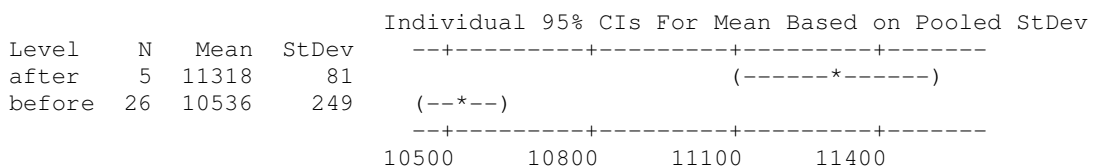


Pooled StDev = 23.5

One-way ANOVA: Telkom versus B/A

Source	DF	SS	MS	F	P
B/A	1	2565969	2565969	47.17	0.000
Error	29	1577469	54395		
Total	30	4143438			

S = 233.2 R-Sq = 61.93% R-Sq(adj) = 60.62%

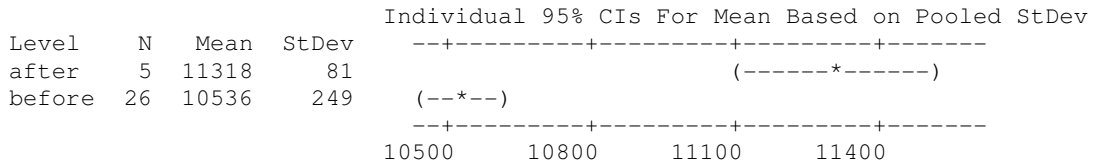


Pooled StDev = 233

One-way ANOVA: Telkom versus B/A

Source	DF	SS	MS	F	P
B/A	1	2565969	2565969	47.17	0.000
Error	29	1577469	54395		
Total	30	4143438			

S = 233.2 R-Sq = 61.93% R-Sq(adj) = 60.62%

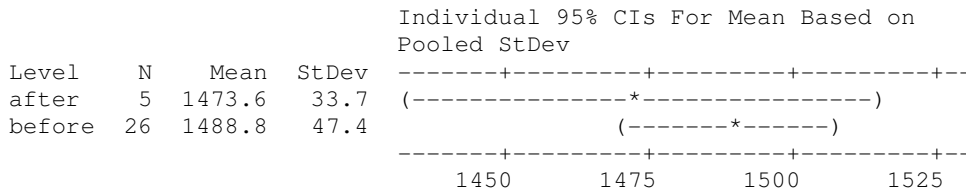


Pooled StDev = 233

One-way ANOVA: Old Mutual versus B/A

Source	DF	SS	MS	F	P
B/A	1	975	975	0.47	0.500
Error	29	60733	2094		
Total	30	61707			

S = 45.76 R-Sq = 1.58% R-Sq(adj) = 0.00%

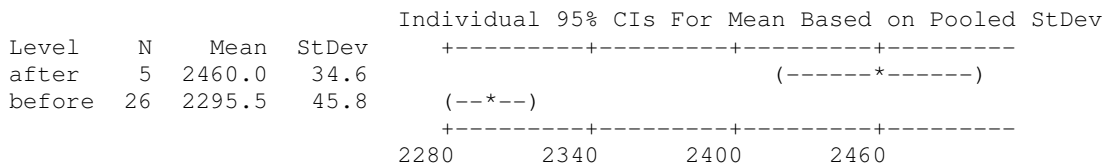


Pooled StDev = 45.8

One-way ANOVA: Pick and Pay versus B/A

Source	DF	SS	MS	F	P
B/A	1	113478	113478	57.58	0.000
Error	29	57155	1971		
Total	30	170633			

S = 44.39 R-Sq = 66.50% R-Sq(adj) = 65.35%



Pooled StDev = 44.4

APPENDIX F: ABSA SENS ANNOUNCEMENT

Absa/ Barclays - Firm Intention Announcement

9 May 2005

Absa/ Barclays - Firm Intention Announcement

NOT FOR RELEASE, PUBLICATION OR DISTRIBUTION, IN WHOLE OR IN PART, IN OR INTO

CANADA. THE RECOMMENDED OFFER WILL NOT BE MADE TO SHAREHOLDERS WITH REGISTERED ADDRESSES IN CANADA WHO, IN TERMS OF CANADIAN LAW, MAY ALSO NOT

VOTE AT THE SCHEME MEETING
FIRM INTENTION ANNOUNCEMENT

Absa Group Limited PLC	Barclays Bank PLC	Barclays
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(Incorporated in the (Registered in England)	(Registered in England)
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Republic of South Africa)	(Registration number:
---------------------------	-----------------------

(Registration number: (Registration number: 1986/003934/06)	1026167)	0048839)
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BARC	(`Barclays`)	LSE CODE:
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JSE CODE: ASA	ISIN CODE:
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ISIN CODE: ZAE000013389

GB0031348658

(`Absa`)

ANNOUNCEMENT OF A FIRM INTENTION BY BARCLAYS TO ACQUIRE A MAJORITY STAKE IN

ABSA AT A PRICE OF R82.50 PER SHARE

Key features of the Recommended Acquisition:

- Recommended Acquisition by Barclays to acquire up to 60% of Absa ordinary

shares for R82.50 per share in cash effected by an inter-conditional 32%

scheme of arrangement and 28% partial offer

- Ordinary Shareholders will also receive the Absa final dividend of

R2.00 per share

- The transaction is unanimously recommended by the Absa Board, has the

support of management and Barclays has received written expressions of

support from key shareholders representing approximately 63% of Absa

ordinary shares

- Regulatory approval has been received from the Minister of Finance

- The Recommended Acquisition underpins Absa`s vision of developing the

leading financial services business in South Africa and the pre-eminent

bank on the African continent

- It is anticipated that the Recommended Acquisition will generate potential

revenue and cost synergies which are expected to improve Absa`s pre-tax

profits by approximately R1.4 billion per annum four years

after completion

(after incurring implementation costs of approximately R1.8 billion over

the first three years)

INTRODUCTION

The Boards of Directors of Absa and Barclays are pleased to announce that agreement has been reached regarding the terms of Barclays proposed acquisition of a majority stake in Absa (the `Recommended Acquisition`). Barclays wishes to acquire by way of the Recommended Acquisition up to 60% of the ordinary shares in Absa (the `Ordinary Shares`). The Recommended Acquisition is to be achieved through a dual mechanism, being (i) the Scheme (as defined below) and (ii) the Recommended Offer (as defined below), in terms of which Absa shareholders are invited to tender all or some of their Absa shares for purchase. The Scheme, if successful, will result in Barclays acquiring 32% of each Absa ordinary shareholder's shares and the Recommended Offer, if successful, will result in Barclays acquiring up to an additional 28% of Absa's ordinary share capital. The Scheme and Recommended Offer are interconditional. Since Barclays is not seeking to acquire 100% of Absa's ordinary share capital and in the interest of treating shareholders equally, the structure of the Recommended Acquisition is designed to ensure a minimum level of participation by all Absa ordinary shareholders (`Ordinary Shareholders`), while at the same time enabling shareholders who wish to participate to a greater extent to do so. The structure was developed as a direct result of feedback from Absa shareholders. Shareholders will receive R82.50 in cash in respect of each Absa share acquired by Barclays whether pursuant to the Scheme or the Recommended Offer. This allows shareholders to realise an attractive return on their investment at a time when there has been a significant re-rating of the South African banking sector in general and Absa in particular.