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The impact of corporate social responsibility on the corporate financial performance of companies listed on the Johannesburg Securities Exchange.

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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 Master of Business Administration.

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ABSTRACT

Over the past decade, sustainability has emerged as one of the foremost issues faced by corporations across all sectors and Corporate Social Responsibility has gained much momentum in the past two decades. This research investigated whether investors in emerging markets are equally concerned about a firm's social and environmental impacts as their counterparts in developed economies. The aim was to ascertain whether or not a correlation exists between CSR and stock market performance of South African listed companies. This was the first study undertaken in South Africa that specifically investigated the relative performances of SRI listed and non-SRI listed companies. The findings reveal that there are observable differences between the average market returns of the FTSE/JSE Socially Responsible Investment Index and the FTSE/JSE All Share Index, as well as the average price/earnings ratios and average price/book value ratios of all companies listed the JSE Main Board. Although two out of the three hypotheses failed to yield significant statistical outcomes, all the findings were in favour of the SRI. The research has opened up the avenue for future studies to investigate the purported links between sustainability and financial performance in the context of emerging markets.

Keywords: Corporate Social Responsibility, Socially Responsible Investing in Emerging Markets, JSE SRI Index, Corporate Financial Performance.

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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. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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LIST OF ABBREVIATIONS

ALSI	All Share Index
AMR	Average Market Returns
ANOVA	Analysis of Variance
BEE	Black Economic Empowerment
BFANet	McGregor's Bureau of Financial Analysis database
CFP	Corporate Financial Performance
CSR	Corporate Social Responsibility
DY	Dividend Yield
EIRIS	Ethical Investment Research Services
ESG	Environmental, Social, Governance
FCF	Free Cash Flow
FTSE	Financial Times Stock Exchange
GDP	Gross Domestic Product
GRI	Global Reporting Index
ICB	Industry Classification Benchmark
IFRS	International Financial Reporting Standards
JSE	Johannesburg Securities Exchange
KLD	Kinder, Lydenberg, Domini Research & Analytics Firm
MCap	Market Captalisation
OECD	Organisation for Economic Co-operation and Development
PBR	Price/Book Value Ratio
PER	Price/Earnings Ratios
PRI	Principles for Responsible Investment
R&D	Research and Development
ROA	Return on Assets
ROE	Return on Equity
SRI	Socially Responsible Investing/Investment
SWIX	Shareholder Weighted Index
UNCTAD	United Nations Conference on Trade and Development
WACC	Weighted Average Cost of Capital

1. INTRODUCTION TO THE RESEARCH PROBLEM

1.1 Background

Over the past decade, sustainability has emerged as one of the foremost issues faced by corporations across all sectors. Conventional thinking had always been that environmental protection comes at an additional cost to firms which may erode their profitability and overall competitiveness (Ambec and Lenoie, 2008). However, new evidence emerged from developed markets that sustainability and profitability are not necessarily mutually exclusive (Berns *et al.*, 2009). There is a plethora of case study examples of organisations that %do well by doing good+, indicating that investors, customers and employees may reward organisations that show due consideration to society and the environment in going about their operations (Heal, 2008).

The principles of honest business and a responsibility to the society and environment in which a business operates have been an entrenched part of commendable business practice for a long time. During early trade and the development of industries, traders and firms with values that resonated with their respective communities, as well as those with honourable business practices, often reaped greater success than their counterparts (Heal, 2008).

There is much evidence, albeit anecdotal, that even as trade and industry formalised into their current form, social responsibility remained on the agenda of top

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businesses. David Rockefeller, president of the Chase Manhattan Bank in the mid 1960s, was a prominent supporter of business involvement in the social arena, and stated as early as in 1973 that his organisation felt accountable not only to the traditional stakeholders, but "to society as a whole" (Cross, ca. 1975). To a degree, this sentiment continued through the development of economics and persists in many varied forms in modern society.

Strangely, this view is not widely accepted in recent times. To detractors, these principles are diametrically opposed to the driving force behind business, wealth creation. Proponents of this standpoint are of the opinion that philanthropy, value systems and social responsibility require business to take societal and environmental concerns into consideration at the expense of greater economic returns and, ultimately, sacrifice profit. Adam Smith is widely regarded as the earliest proponent of this view, which was also espoused by Milton Friedman in his much quoted article in the New York Times (Friedman, 1970). Friedman argued that business's only responsibility to society was to generate profits whilst operating within the legal framework. There is a school of thought currently that supports Friedman's views, adding that Corporate Social Responsibility is only of value if profits are sacrificed in its execution. This has been supported by Elhauge (2005) and more recently Reinhardt, Stavins and Vietor (2008).

Although this dichotomy in perspective exists, there is a growing body of evidence in the literature supporting the ideals of sustainability and Corporate Social Responsibility, and business is now steadily accepting these and integrating them into all spheres of practice.

1.2 Research Problem

The relationship between a company's Corporate Social Responsibility (CSR) and its Corporate Financial Performance (CFP) is contested within academia, with researchers asserting that not only can CSR have a negative or positive impact on CFP, but also none at all.

CSR has gained much momentum in the past two decades. Many corporations in developed economies have identified and begun to respond to the market incentives for socially and environmentally responsible behaviour. Despite being a relatively new consciousness, Steve Schueth reported in his 2003 paper, *Socially Responsible Investing in the United States*, that the United States Socially Responsible Investing (SRI) industry already involved over US$2 trillion of professionally managed assets at that point (Schueth, 2003). However, the same evidence has to a far lesser extent (if at all) been recorded in emerging markets and, more specifically, Africa.

Wilson (2007: 7) posited that developing countries are not ready for the high standards of corporate responsibility used in developed countries. He stated that it is accepted in the field of development economics that rich countries' standards are too complicated and too expensive to be applicable to developing countries. Heese (2005) agreed that sustainability practices have yet to be fully evolved in Africa. The findings of Jamali and Mirshak (2006: 243) indicated that there is a lack of a systematic, focused and institutionalised approach to corporate sustainability in a developing country context. According to critics, environmental standards attempt to

turn banks into %surrogate protection agencies and labour regulators+ in place of governments in developing countries (Wilson, 2007: 7).

The general expectation is that interest and uptake of corporate sustainability is lacking in emerging markets. However, Jeremy Baskins findings from his 2006 study revealed that South Africa has a significant SRI market and has the most developed corporate responsibility outlook in Africa and the Middle East. It would therefore appear that the sustainable practices of South African firms are largely overlooked. This may explain the dearth of studies investigating the impact of sustainable practices on the bottom line of South African companies. The purpose of this study is to fill this void and to open up a new avenue of research relating to CSR in emerging markets.

The research investigates whether investors in emerging markets are equally concerned about a firms social and environmental impacts. The Johannesburg Securities Exchange (JSE) Limited introduced the very first SRI index in an emerging market in May 2004 in response to the burgeoning debate around sustainability globally and in the South African context (Sonnenberg & Hamann, 2006: 305). The performance of SRI funds relative to non-SRI funds can provide insights into the effect of social and environmental responsibility on CFP (Heal, 2008: 3). The focus is on investor behaviour and the findings will reveal the extent to which CSR is rewarded, penalised or neither, by the stock market.

1.3 Research Objectives

The objectives of this research are:

1. To determine the average market performance of the FTSE/JSE SRI Index relative to the FTSE/JSE All Share Index, in terms of average market returns.

2. To determine the average market performance of companies listed on the FTSE/JSE SRI Index relative to those companies listed on the JSE Main Board, but not on the FTSE/JSE SRI Index, in terms of average price/book value ratios.

3. To determine the average market performance of companies listed on the FTSE/JSE SRI Index relative to those companies listed on the JSE Main Board, but not on the FTSE/JSE SRI Index, in terms of average price/earnings ratios.

1.4 Research Aim

The research aim is to ascertain whether or not a correlation exists between Corporate Social Responsibility and Corporate Financial Performance of South African listed companies. The results of the study will be relevant to business leaders, investors and academics concerned with the driving forces behind CSR.

1.5 Report Structure

The report is structured as follows:

Chapter 1 introduces the topic by way of some background theory and provides the motivation and structure of the research.

Chapter 2 appraises the relevant, prior research related to the topic and explores the theory base and prevailing understanding of the concepts encountered in the study, by way of a literature review.

Chapter 3 formalises the research questions and experimental hypotheses that will be investigated in the study.

Chapter 4 outlines the research methodology and approaches employed to collect the required data and conduct the data analysis.

Chapter 5 consolidates and presents the results of the investigation in the form of tables and graphs.

Chapter 6 analyses and discusses the key findings and pertinent issues emerging from the results, in light of the findings of previous studies.

Chapter 7 summarises and concludes the report, charting a way forward for future research in the area of Corporate Social Responsibility and Corporate Financial Performance.

2. LITERATURE REVIEW

2.1 Overview

The literature review explores the construct of CSR from the general perspective and as applicable to emerging economies. The accepted measurements and indicators of CSR and CFP are investigated, and form the basis for the metrics used for the data collection and analysis. The theory base also addresses the purported links between CSR and CFP and examines the Socially Responsible Investment (SRI) movement in some detail.

2.2 Corporate Social Responsibility Background

2.2.1 Evolving Definition of Corporate Social Responsibility

What is Corporate Social Responsibility? Due to lack of consensus, in the literature, different authors have described it in a variety of ways. There is a range of terms all evidently referring to the same process. So we have "Sustainability", "Corporate Sustainability", "Corporate Social Responsibility", "Corporate Accountability" as well as "Corporate Citizenship" used interchangeably depending on the era, author preference or geographical

location. "Corporate Social Performance" has been described as the application of Corporate Social Responsibility, which is a practicable and measurable variable, where Corporate Social Responsibility is not a variable and therefore impossible to measure (Van Beurden and Gössling, 2008).

(However, in this study, CSR has been treated as a binary/categorical variable, where an organisation's sustainability is determined by its listing on the FTSE/JSE SRI Index. The criteria that must be met by an organisation in order to list on the SRI index are examined in *2.6.3 FTSE/JSE SRI Index*.)

A number of definitions for CSR have emerged over the years which are explored in this section.

The concept of Sustainable Development provides the context and overarching framework for Corporate Social Responsibility, discussed in more detail in *2.2.3 A Framework for Corporate Social Responsibility*. One of the earliest definitions of sustainable development, which has gained wide acceptance, comes from the Report of the World Commission on the Environment – the Brundtland Commission – and states that "a sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development; and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations." (World Commission on the Environment and Development, 1987).

A broad definition of Corporate Social Responsibility was presented at the World Business Council for Sustainable Development in 1998: "Corporate Social Responsibility is the continuing commitment by business to behave ethically and contribute to economic development, while improving the quality of life of the workforce and their families as of the local community at large" (Van Beurden and Gössling, 2008).

Gössling and Vocht (2007) have described Corporate Social Responsibility as "an obligation of the business world to be accountable to all of its stakeholders . not just its financial ones."

Portney defined Corporate Social Responsibility as "a consistent pattern, at the very least, of private firms doing more than they are required to do under applicable laws and regulations governing the environment, worker safety and health, and investments in the communities in which they operate" (Portney, 2005). In a later review of his earlier assertion, he expands on this to include efforts by companies to make their products safer than required, revises the term "private firms" to include those that are publicly traded and touches on the notion of corporate governance (Portney, 2008: 261).

This definition contains an important subtlety . that private firms voluntarily go the extra mile. It also incorporates the need to align the financial, social and environmental responsibilities of corporations, summarised by Hammond as "planet, people and prosperity" (Hammond, 2005: 3).

The most comprehensive definition was obtained from Deloitte: "Corporate Responsibility and Sustainability is the continual improvement of business operations to ensure long-term resource availability through environmental, socially sensitive, and transparent performance as it relates to consumers, business partners and the community" (Deloitte, 2008: 3).

For the purpose of this study, we shall restrict the terminology to Corporate Social Responsibility (CSR) and define it, based on a broad amalgamation of the above, as: "a programme of actions, undertaken voluntarily by a company, to ensure long-term resource availability through environmental, socially sensitive, and transparent performance as it relates to consumers, business partners and the community".

2.2.2 A History of Corporate Social Responsibility

One of the first debates around CSR occurred in 1932 with a series of articles by Columbia professor Adolf A Berle and Harvard professor E. Merrick Dodd, featured in the Harvard Law Review journal (Cochran, 2007: 449). In answering the question, "For whom are corporate managers trustees?" the professors posited the response that corporate managers are responsible to the public as a whole, not only shareholders. Their argument was that the law permits and encourages firms to operate primarily because they are of service to the community, and not because they are a source of profit for their owners (Cochran, 2007: 449).

However, CSR in its current form is a construct that originated in the 1950s. The 1953 publication of Howard R. Bowen's seminal book, *Social Responsibilities of the Businessman*, arguably marked the beginnings of the modern era of CSR, as we know it today (Carroll, 1999: 269). In this book, Bowen famously posed the question, "What responsibilities to society may businessmen reasonably be expected to assume?" The answer was that businessmen were responsible for the consequences of their actions in a sphere somewhat wider than that covered by their profit-and-loss statements and, interestingly, 93.5% of businessmen responding to a *Fortune* magazine survey conducted during the same period, agreed with the statement (Carroll, 1999: 270).

The 1950s also saw the emergence of civil rights movements in the United States, which gained momentum with the famous 1954 *Brown vs. Board of Education* verdict (Cochran, 2007: 449). (This United States Supreme Court decision dismantled the legal basis for racial segregation in schools and other public facilities). Civil activists were to become some of the most vocal and hard line proponents of social and environmental awareness, exerting pressure on government to regulate corporations' self-serving approach to business.

The environmental movement is said to have been sparked by Rachel Carson's book, *Silent Spring,* published in 1962 (Cochran, 2007: 449). In the book, Carson exposed the harmful effects of pesticides on the environment and accused the chemical industry of spreading misinformation. The book was aimed at ordinary people and topped the best-sellers list in the USA for six months (MacKay & Watson, 2003: 625). More impetus was subsequently

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provided by Ralph Nader's 1965 book, *Unsafe at Any Speed,* wherein he accused automobile manufactures of refusing to spend money on improving the safety of cars (Cochran, 2007: 449). Thenceforth, it became commonplace for society to hold corporations to account for socially and environmentally irresponsible behaviour. The Vietnam War of the 1960s and early 1970s brought about the unification of the various social movements and ushered in an era of activist groups and NGOs concerned about businesses and business practices (Cochran, 2007: 449).

In the 1960s there was also a marked increase in academic thinking with regard to CSR. One of the proponents of CSR during this period was Keith Davis, who argued that CSR refers to "businessmen's decisions and actions taken for reasons at least partially beyond the firm's direct economic or technical interest" and asserted that it was a managerial issue which can be justified in the long-run by economic returns to the firm (Carroll, 1999: 271).

The 1970s was a decade in which environmental issues rose to prominence and became a subject of public and political concern. Greenpeace and Friends of the Earth were founded in 1971 (MacKay & Watson, 2003: 625). These two organisations have been instrumental in the reform of regulation over the past 40 years, notably lobbying the World Bank to address environmental and human rights concerns. In 1972 the first major international conference addressing environmental issues systematically and coherently was held. This was the United Nations Conference on the Environment held in Stockholm (MacKay & Watson, 2003: 625). In 1978 William Frederick wrote a working paper titled *From*

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CSR1 to CSR2, in which he noted that businesses had risen beyond the level of academic debate but were pragmatically responding to social pressures (Cochran, 2007: 450).

The 1980s witnessed the emergence of environmental legislation in the UK and USA. Interest in this period was mostly focused on conservation and on ±sustainable developmentq a term first coined by the Brundtland Commission publication, *Our Common Future,* in 1987.

In the late 1990s the concept of sustainability started to include CSR (as well as governance). This paradigm shift came about as a result of the increase in scandals such as that involving Enron. It soon became clear that unethical behaviour was just as detrimental to society as inappropriate environmental practices. So CSR shifted from being the reserve of the corporation chairman, and was elevated to business priority. Kielstra reports that CSR has moved along a continuum to a point where ‰oday leading companies are looking at aligning business strategy with societal needs+(Kielstra, 2008: 9).

Other drivers of the CSR revolution have been concerns over climate change and energy security. These fears were driven largely by the rapid urbanisation of the world and the growth of megacities. So currently CSR includes environmental responsibility, risk management and corporate governance, whilst maintaining the drive towards improved financial performance.

2.2.3 A Framework for Corporate Social Responsibility

From an economic perspective, CSR is better understood from the point of view that it has evolved in response to market failures. It can be defined as a programme of actions to reduce externalised costs or to avoid distributional conflicts (Heal, 2005: 1). In discussing an economic and financial framework for CSR, Heal outlined the necessity for such a programme in business. He described how the majority of corporate-societal conflicts relate to exorbitantly high external costs shuffled onto society, or distributional costs. In both instances, good CSR programmes are demonstrated to be highly capable of alleviating those tensions. Moreover, CSR has been shown to improve corporate profits and protect against the possibility of reputational damage.

Hillman (2001: 126), on the other hand, stated that there are four components underlying corporate social performance: economic responsibility to investors and consumers, legal responsibilities, ethical responsibility to society and a discretionary responsibility to the community (Hillman, 2001: 126). Evidently, CSR integrates the interaction between principles of social proactiveness and social responsiveness. Social and environmental assets can be regarded as public goods, characterised by non rivalry and non excludability; therefore, private companies lack proper incentives to invest in the production of these goods and their maintenance.

In addition to the foregoing characteristics of CSR, Hillman (2001: 127) identified two further dimensions of CSR, namely stakeholder management and social

issue participation. He went on to say that stakeholders are those who carry the risk of having invested some form of capital in a company and include shareholders, employees, customers and others. Social issue participation, on the other hand, is characterised as pertaining to a broader definition of social responsibility beyond primary stakeholder exchange.

With regards to financial performance, CSR is shown to minimize conflicts between corporations and society. It does this by aligning the private costs of business with the cost to society of its operations. The benefits of good CSR programmes include the following six points (Hillman, 2001).

- **Risk reduction:** Companies with good CSR policies in place are rarely the target of criticism from environmental and social non-governmental organisations. They limit themselves to safe and sound environmental practices, have good employer-employee relationships and are not involved in gross human rights violations. This protects their earnings and share prices, as well as their market share.

- **Waste reduction:** Companies that engage in active waste reduction strategies are less likely to find themselves as targets of regulatory bodies. The negative attention drawn to such companies often deters potential investment, and the subsequent lawsuits and civil legal action is a great source of revenue losses. As such, CSR bestows upon the company a protective layer over its funds and earnings.

- **Regulatory protection:** Much in the same way that CSR generates a valuable relationship with regulatory agencies by reducing risk of legal action, so it also affords companies access to operating rights in potentially environmentally sensitive areas. For example, oil companies with good environmental track records may be afforded mining rights on the basis of their strong reputation for being socially responsible.

- **Brand equity:** In many different economic sectors, there is very little to choose between competitors. In these instances, customers' decisions are often tipped by a company's image or branding. A case in point is the drop off in Nike sales after the revelations of poor worker compensation in some of their Third World operations, while Starbucks has shown steady growth after investing in conflict avoidance, as well as publicising its links with Conservation International. They source their coffee beans from growers with environmentally friendly profiles and have agreed to do so through the Fair Trade NGO.

- **Employee productivity:** Firms with good employer-employee relations retain personnel who tend to be more productive at work, as they are in an enabling environment. Their staff do not feel the need to continually justify their employment at the firm to loved ones, they are always motivated and increase the productivity of the company as a whole. They work harder according to what economists call the "efficiency wage theory," which states that employees work harder when they are paid more. In this way,

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overall productivity is improved more than the costs incurred in raising salary packages.

- **Cost of capital:** CSR can reduce a company's cost of capital through socially responsible investing (SRI), a construct explored in more detail in *2.6   Socially Responsible Investment.*   Succinctly put, limitations are placed on the constituents of an SRI portfolio, and if a significant amount of money is invested in companies with good CSR records, then their cost of capital will be reduced.

With regards to CSR and capital markets, there is more evidence that not only is there a relationship between CSR and CFP, but the trend points towards a favourable relationship. Upon release of the Toxic Releases Inventory by the US Environmental Protection Agency, Hamilton identified that there was a significantly negative impact on the stock market value of implicated companies. He quantified this to a value of US$236 000 per leaked chemical associated with a given company (Hamilton, 1995). This finding has since been corroborated in other capital markets such as Argentina, Chile, Mexico and the Philippines (Dasgupta *et al.,* 2001).

Financial institutions are sometimes exempted from the rigorous scrutiny usually associated with CSR and SRI. However, when one analyses the projects they finance, or looks at the corporate governance issues prevalent at managerial level, it becomes evident that banks are subject to allegations of inappropriate behaviour through the actions of their clients. Therefore, CSR has a significant

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role to play in these institutions. Bert Scholtens identifies financial institutions as "drivers of corporate social responsibility" (Scholtens, 2006). He notes that finance affects the timing and size of economic operations, facilitates the trading, diversification and management of risk as well as easing the exchange of goods and services. Through three different mechanisms, finance is shown to drive CSR.

During early financing, business culture and strategy can be influenced by the choice of projects a bank finances. An example is Green Project Finance in the Netherlands, which offers credit for investment projects that improve the environment. The second mechanism involves community investing. In this strategy, minority groups such as women, low- and middle-income earners that are likely to be marginalised by financial institutions, are provided access to capital and basic banking products. The third mechanism is project finance. As stated earlier, banks are sometimes criticised for the actions of their clients, hence it becomes important to rationalise the projects they finance. For this reason, a number of major banks adopted what became known as the Equator Principles in 2003. They are a set of principles committing each institution to financing only those projects that meet predetermined social responsibility criteria.

So a suggested framework for incorporating CSR into a company's existing policies, adapted from that implemented by KPMG, is as follows:

1. **Identification and prioritisation of CSR issues:** In this phase, the company's approach is reviewed and determinations are made as to whether the major sustainability focus areas have been prioritised. Opportunities are also sought to improve the company's sustainability rating.

2. **CSR strategy and governance:** The sustainability strategy and governance structures are then challenged to respond to the material sustainability issues raised in the first phase.

3. **Sustainability performance management:** Key performance indicators and targets are developed in the context of an effective sustainability management system. The performance management processes are reviewed as well as the company's ability to measure performance against the sustainability strategy.

4. **CSR reporting:** This improved sustainability performance is then disclosed in order to boost the company brand value. At this point it is important to determine whether the CSR reporting is balanced and accurately reflects the company's performance.

Each phase feeds into the subsequent one, and phase four completes the cycle by leading back to the initial review of the existing company policy. In this way, there is a continual review of policy, which leads to better management, greater shareholder value in the short and long term, as well as ensuring that the company is better prepared for future market changes (Lees, 2010).

2.2.4 Corporate Social Responsibility Indicators

Van Beurden and Gössling (2008:411) rate a company's performance with regard to CSR in terms of the following three categories:

- **CSR1:** This refers to the extent of social disclosure about matters of social concern, where measurement consists of content analysis of corporate disclosures to the public.

- **CSR2:** This refers to corporate action relating to concrete, observable CSR processes and actions, such as philanthropy, social programmes and pollution control. It is measured by money spent on such initiatives as a percentage of company turnover.

- **CSR3:** This refers to corporate reputation ratings such as KLD, Fortune, Moskowitz and Business Ethics. Here it is assumed that CSR reputations are indicative of the company's underlying CSR orientation and behaviour.

There are a number of standards, both locally and internationally, used to gauge a company's CSR, ranging over different spheres. Locally, there is the Black Economic Empowerment legislation as well as scorecards used to rate a company's compliance, financial reporting and listing requirements. The JSE has developed the SRI Index, in conjunction with the UK Financial Times Stock Exchange (FTSE), which lists only those corporations meeting stringent CSR criteria. Added to this are voluntary governance codes such as Turnbull, King II and King III. International standards include the United Nations Global Compact,

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the World Business Council for Sustainable Development and the Principles for Responsible Investment (PRI). Companies trading internationally are encouraged to submit to the Global Reporting Initiative, Carbon Disclosure Project and ISO 14001, and they can list on the Dow Jones Sustainability Index. Lastly, preceding the FTSE/JSE SRI Index, the FTSE developed the FTSE4GOOD, and the two are in increasing partnership with each other (Van Beurden and Gössling, 2008).

2.3 Corporate Social Responsibility in Emerging Markets

Historically, markets in developing countries have faced contrasting challenges to those of first world countries. They often find themselves in countries run by post war governments with significant budget deficits, heavy burden of disease and considerable skills shortage. Is there then, a similar case for corporate responsibility and sustainability in emerging markets as in the First World? Given the perceived need to engage in programmes that may supposedly defer return on equity in lieu of greater social and environmental involvement, are these economies robust enough to withstand and unreservedly embrace it? While there is much data in support of the positive impact of sustainability on CFP, there is very little published on its implementation and impact on emerging markets.

Wilson (2007: 7) posited that developing countries are not ready for the high standards of CSR used in developed countries. He stated that it is accepted in the

field of development economics that rich countriesqstandards are too complicated and too expensive to be applicable to developing countries.

Jamali and Mirshak (2006) found that CSR is still a fairly new concept in Africa and is viewed most commonly in the context of philanthropy rather than good business practice which supports the bottom line. Even though all the companies surveyed adhered to a discretionary concept of CSR, there remains a lack of a systematic, focused and institutionalised approach to corporate sustainability in the developing country context.

On the African continent there still exists a vast gap between rich and poor, infrastructure in many communities is nonexistent and many other challenges exist that impede full implementation of sustainability practices. Jamali and Mirshak made the point, however, that it is exactly in this context that corporate social responsibility is required, stating that %the improvement of living conditions is unlikely to materialize in the absence of active private sector participationõ + (Jamali and Mirshak, 2006: 260).

On the other hand, there is a growing body of evidence that business in emerging markets is in fact embracing CSR. In his analysis of leading emerging-market companies from across the globe, Jeremy Baskin concluded that sustainability reporting in these markets may well exceed current perception, and sometimes surpass that of high-income OECD countries. Using the Dow Jones Sustainability Index, Global Reporting Index (GRI) and ISO 14001, Baskin asserted that not only have emerging markets embraced Corporate Social Responsibility, in some sectors

they are world leaders. Though this view must be tempered with the understanding that the emerging markets' improvement came against a very low baseline, perhaps inflating the percentage increase in compliance activities, the increase is nonetheless significant. When assessing the degree of GRI compliance, Baskin raised the point that many of these companies are subsidiaries of major international corporations, who themselves are under pressure from their home governments to comply (Baskin, 2006).

In their paper, Dawkins and Ngunjiri (2008) contrasted 91 of the largest companies listed on the JSE All Share Index, with 90 from the *Fortune* Global 100 in 2006. They assessed both groups for levels of CSR reporting in order to determine if the levels of CSR reporting in South Africa were comparable with those of leading global companies. They concluded that CSR reporting in South Africa, across the five themes of environment, community, diversity, employee relations and human rights, exceeds that of large multinationals from countries such as the United States, Germany and Japan (Dawkins and Ngunjiri, 2008). They attributed their findings to the legal and regulatory framework within South Africa that composes legitimate business practice. They added that South Africa's degree of CSR reporting is such that it warrants further scrutiny to identify those elements that may be replicated elsewhere in the world.

As the main driving force behind the mining industry, a traditionally large part of South African industry, the financial sector has played a significant role in the development of the country. Mining has a considerable impact on society and the environment, thus it is imperative that financial institutions incorporate CSR

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measures, such as the Equator Principles, into their operations. Mngxitama and Radebe (2010: 292) placed the onus on South African finance institutions to consider the social and environmental impact of their investments in mining activities throughout Southern Africa, given their strong influence on the mining companiesq behaviour. They contended that financial institutions should ensure that the companies they fund adhere to international standards for labour, safety and health, environmental protection, human rights, corruption and transparency. However, they also added that the South African government is expected to create a framework on how South African companies behave beyond its borders, as per the United Nations Environmental Programme (UNEP) objectives (Mngxitama and Radebe, 2010: 291).

In the 2007 United Nations Environment Programme Finance Initiative: African Task Force report, the investigators determined that of the South African banks surveyed, regarding inclusion of environmental, social and governance principles (ESG) in credit risk assessment:

- Three banks had just begun incorporating ESG principles into risk assessments.

- Four banks were formalising it as part of the banksqentire operation.

- Three banks were displaying elements of best practice.

Thus, the financial framework necessary for the broader business community in South Africa to embrace CSR is growing steadily, being supported ably by one of the drivers of CSR, the financial institutions.

Lastly, in a paper based on a report prepared for the United Nations Conference on Trade and Development (UNCTAD), the Ethical Investment Research Services (EIRIS) analysed the state of CSR in emerging markets. They examined forty leading companies in ten emerging markets using EIRIS gathered data, and assessed them against environmental, social and governance criteria, including board practice, human rights, environment, and biodiversity. Public disclosure of key governance issues was found to be very high, and companies in high impact sectors performed very well on environmental and health and safety issues. Importantly, concurring with Baskin's findings, the selected South African and Brazilian companies stood out as having the highest assessments of the evaluated companies. Their development of some of the first SRI indices in emerging markets demonstrates their commitment to CSR, as well as their acknowledgement of investor interest in socially responsible investing (EIRIS, 2009).

2.4 Corporate Social Responsibility and Corporate Financial Performance

CSR is a complex and multi-faceted concept that cannot be limited to a distinct premise. It then becomes problematic to define a relationship between CFP and a single outcome such as CSR. The relationship between a company's CSR and its

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CFP is contested within academia, with researchers asserting that not only can it have a negative or positive impact on financial performance, but also none at all. This section focuses on the gauges of CFP cited in literature, the transmission mechanisms through which CSR may affect CFP, and the variables affecting CFP. In addition, the seemingly contradictory results on the correlation between CSR and CFP are discussed.

The indicators of CFP discussed in the literature include profitability, stock market value, return on assets, return on equity and economic value added. Helfert (Wingard, 2001: 91) defined profitability as %he effectiveness with which management has employed both the total assets and net total assets, as reflected on the balance sheet.+ This effectiveness is thus gauged by comparing net profit to assets utilised in profit generation. Wingard (2001: 95) defined return on assets (ROA) as the %et profits of a company divided by its total assets+, return on equity (ROE) as the %et profit after tax divided by total equity+and economic value added as %a measure of profitability that considers the cost of all capital and also corrects for distortions+owing to the accounting reporting procedures employed in different jurisdiction, e.g. International Financial Reporting Standards (IFRS). Stock market value refers to the prevailing price of a company s share on the open market.

Therefore, CSR impacts on CFP in terms of both accounting-based measures (such as ROA and ROE) and market-based measures (such as stock market value). This study focuses on the impact of CSR on CFP in terms of the latter market-based measures; however, it is important to understand all aspects of the relationship

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between CSR and CFP. For this reason, both the accounting-based and market-based effects are examined.

Heal and Ambec *et al.* offered supporting theories to explain the mechanism through which CSR can affect CFP. Heal (2008: 58) argued that CSR affects a company's CFP by shifting demand away from the stocks of certain companies, sin stocks such as tobacco and gambling companies, and to the extent that share prices depend on supply and demand, may lead to lower share prices. Moreover, if a "company's market value is correlated with its social and environmental ratings, SRI funds could demand more of its shares and inflate its market value." (Heal, 2008: 59)

Ambec *et al.* (2008: 45) argued that improving a company's CSR can lead to an improved financial performance without necessarily leading to an increase in cost, as shown in Figure 1.

Ambec *et al.* (2008: 46) stated that a company's CFP, as evidenced by increased revenue, can be improved by its CSR through better access to certain markets and product differentiation. They postulated that better environmental performance may ease access to niche markets whereas product differentiation can be used to exploit environmentally conscious market segments. They further affirmed that even if green products are more expensive to produce, the extra cost can be transferred to consumers willing to pay more for environmentally friendly products.

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Figure 1: Positive Links Between Environmental and Economic Performance
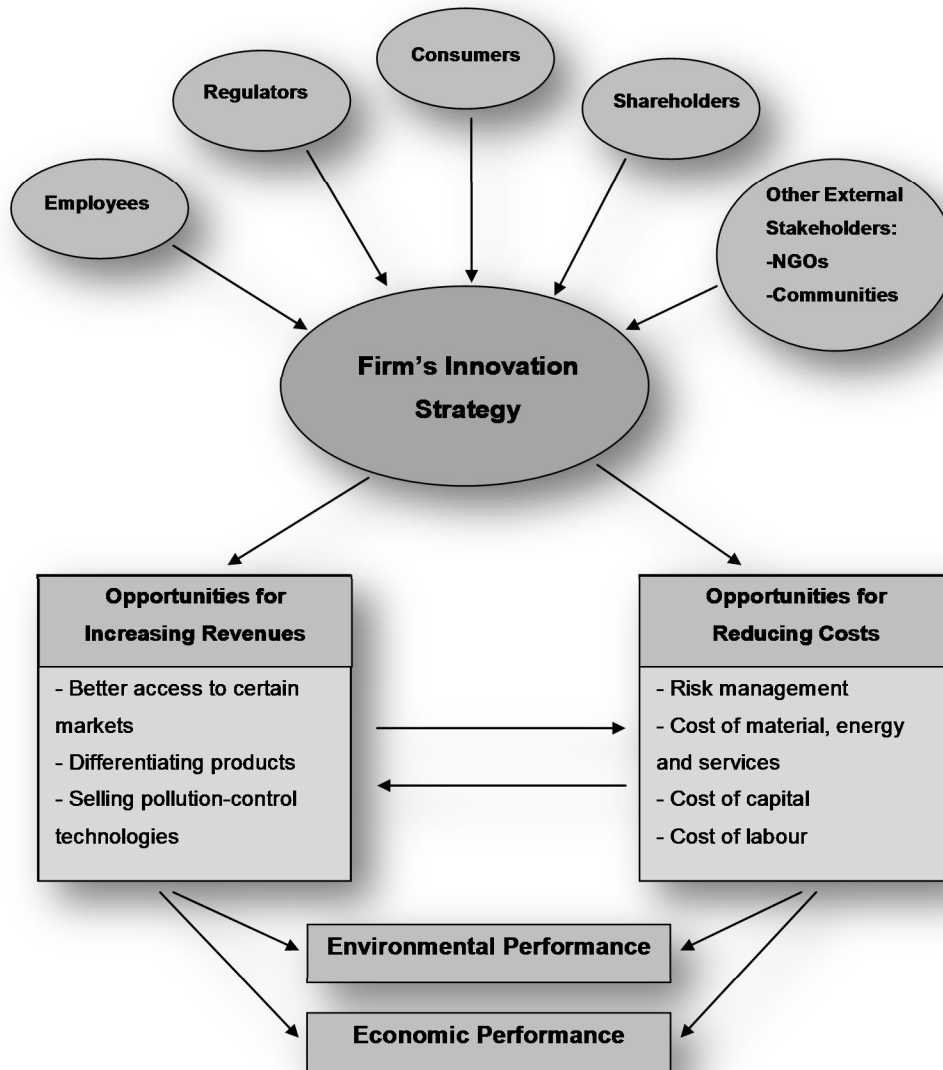
Source: Ambec, S., Lanoie, P. (2008). Does it pay to be green? A systematic overview. *Academy of management perspectives,* Vol. 1:pp45-62.

Ambec *et al.* (2008: 46) asserted that cost reductions associated with CSR, such as risk management and relations with external stakeholders, may lead to improved CFP. It is argued that improved CSR by a company may lead to improved relations

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between the company and its stakeholders and thus also mitigate against risks. Companies that avoid producing negative externalities have lower liability costs and a higher financial performance.

Moreover, Ambec *et al.* argued that environmental performance "allows a company to anticipate and decrease the risks associated with future regulation" (Ambec *et al.*, 2008: 46) thus impacting positively on their financial position, as highlighted in Table 1.

Regression and correlation analyses to determine the existence of a relationship between CSR and CFP have provided inconclusive results with Simpson and Kohlers' (2002) results, consistent with neoclassical economists, finding a negative correlation; Waddock and Graves (Simpson, 2002) and Bird *et al.* (2007) a positive relationship; and McWilliams and Siegel (2000: 604) no relationship.

Simpson and Kohlers (2002: 101) argued that a company's increased social performance leads to a decline in CFP as it leads to "firms incurring costs that decrease profits and shareholder wealth" (Simpson and Kohlers, 2002: 101). In addition, they introduced a "managerial opportunism hypothesis" which looks at moral hazards associated with CSR. It suggests that when CFP is high, managers decrease expenditure on social performance as they can increase short term profitability and their personal compensation, which is related to short term profitability. Conversely, when CFP is in decline, managers attempt to divert attention from this by increasing expenditure on social performance.

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Table 1: Positive Links Between Environmental and Economic Performance

OPPORTUNITIES FOR INCREASING REVENUES	CIRCUMSTANCES MAKING THIS POSSIBILITY MORE LIKELY	EXAMPLES
1) Better access to certain markets	More likely for firms selling to the public sector (construction, energy, transportation equipment, medical products, and office equipment) and to other businesses.	The Quebec government now cares about the environmental performance of all vehicles it
	b) Willingness-to-pay by consumers	
		and that of other companies.
	and paper, metallurgy, etc	of the North Sea, thus avoiding
	b) Firms are in highly competitive industries where optimisation of resources in important	their level in 1990 at no cost by implementing an internal
	markets.	down by $4.7 billion following
	c) Firms located in areas where sensitivity to environmental concerns is important	income to work for an organisation with a better reputation for corporate social responsibility.

Source: Ambec, S., Lanoie, P. 2008. Does it pay to be green? A systematic overview. *Academy of management perspectives,* Vol. 1:pp45-62.

However, Waddock and Graves argued that a positive correlation exists between CSR and CFP as the actual costs of CSR are minimal compared to the potential benefits to the company. Moreover, the positive correlation between CSR and CFP is attributable to the "social impact hypothesis", which states that meeting the needs

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of non-owner stakeholders will have a positive impact on CFP. Lastly, since an inherent tension exists between direct and indirect costs of a company, attempts by the firm to decrease these implicit costs through socially irresponsible actions, is thought to result in higher explicit costs.

McWilliams and Siegel (2000: 604) argued that no relationship exists between CSR and CFP and this is explained by the theory that the general situation of the firm and society is so complex that a simple, direct relationship between CSR and CFP cannot be found.

Halme (2009: 325) argued that the inconsistent results on the relationship between CSR and CFP were due to the exclusion of industry specific variables. The inclusion of these ±industry-dummyq variables is intended to take account of industry level factors that explain variation in firm performance across industries such as the economies of scale. Wingard (2001: 197) expounded on this by stating that as long as there is a lack of control variables and insufficient dependent variables, results on the relationship between CSR and CFP will remain inconsistent. McWilliams and Siegel (2000: 603) argued that the models used to test the relationship between CSR and CFP have serious theoretical and empirical shortcomings as they do not consider investment in research and development (R&D), which has been shown to be an important determinant of a companyœ CFP. As such, the results of statistical analyses will be inconclusive. In addition, they stated that there was a misspecification in the econometric models developed, with this leading to ‰upwardly biased estimates of the financial impact of CSR+ (McWilliams and Siegel, 2000: 603).

Goodall (2005) hypothesised a direct link between CSR and shareholder value. The hypothesis was based on the premise that first movers (those who respond earliest to the CSR imperative) will earn higher returns on invested capital and attain higher reinvestment rates since their investments are more profitable. This will in turn lead to an increase in free cash flow (FCF) to the firm. Additionally, managing risk better than competitors will result either in lower costs of production (where specific company risks are concerned) or in lower risk premiums for financing (where common factor risks are concerned), which will decrease the weighted average cost of capital (WACC) for the firm. The increase in FCF and corresponding decrease in WACC will result in higher shareholder value (Goodall, 2005: 53).

Notwithstanding the plethora of diverse views on this issue, Berns *et al.* (2009: 24) present that sustainability thought leaders have found a compelling business case for sustainability-related investments. The impacts relate broadly to investor confidence, customer goodwill and the company brand (Little and Little, 2000).

Among the findings of Berns *et al.* (2009: 24) is the fact that CSR can increase access to capital, financing and insurance. This corroborates O'Rourke's (2002: 1) theory of shareholder activism, which states that CSR has become an important consideration in shareholders' investment decisions. Van de Velde *et al.* (2005: 129) came to the same conclusion that investors are generally willing to pay a premium for companies with good stakeholder relations.

One of the findings of the survey of Berns *et al.* (2009: 24) was that CSR can lead to improved customer loyalty, lowering the rate of customer churn, as well as enhanced

ability to enter new markets. However, no quantitative studies could be obtained to corroborate this finding.

Berns *et al.* (2009: 24) also found that CSR can lead to a stronger brand and greater pricing power. This finding is largely supported by the findings of Ambec and Lanoie (2008: 45) who found a strong positive correlation between sustainable practices and the value of the business.

According to Van Beurden and Gössling (2008: 410), neither a positive statistical nor even a causal relationship between CSR and CFP could guarantee that investment in CSR would pay off, as by the very nature of all investments, pay off is not guaranteed. Although this study does not attempt to establish causality between CSR and CFP, a positive correlation would indicate that investment in CSR is likely to pay off.

2.5 Corporate Social Responsibility and Investor Behaviour

With the literature failing to declare an unequivocal picture of the relationship between CSR and CFP, the question one must ask is, "Do investors respond to information and disclosure concerning CSR activities of a company?" Murray *et al.* concluded that they found no statistically significant relationship between a company's disclosure of its CSR programmes and financial performance, suggesting that investors do not care about non-financial declarations. However, there was a trend towards better CFP in companies with high CSR disclosure. In a working

paper prepared for the Financial Reporting Research Group, Holm and Rikhardsson (2006) examined the experimental investment choices of 93 analysts when confronted with varying information regarding the study companiesqenvironmental performances (Holm and Rikhardsson, 2006). Their analysis revealed that more money was invested in companies with disclosed environmental performance, there was statistically significantly more money invested when moving from the short term to long term, and this held true across both investor groups: novice and experienced. Additionally, the experienced investors were more likely to respond positively to disclosure for short term investments over those made in the long term. Their paper concludes that environmental information has the potential to influence investment decisions, and that investor ability is also important in assessing the quality of environmental disclosure.

2.6 Socially Responsible Investment

2.6.1 Background to SRI

Socially Responsible Investing (SRI) has often been dubbed the %financial cousin+ of Corporate Social Responsibility, in that it developed as a market response to businesses that embraced sustainability practices and principles. In the United States it has been defined as %he process of integrating personal values and societal concerns into investment decision-making+ (Schueth, 2003). The UK Investment Forum describes it as %nvestments enabling investors to

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combine financial objectives with their social values+ (Munoz-Torres *et al.*, 2004: 200). Lastly, according to the Socially Responsible Investment Forum, %SRI is an investment process that considers the social and environmental consequences of investments, both positive and negative, within the context of rigorous financial analysis+. Such investments seek to gain a premium return whilst operating within a framework governed by sustainability goals (Schueth, 2003).

Prior to the establishment of formalised SRI, the church had long been fastidious about how it handled its money, avoiding investments linking it to behavioural patterns contrary to its teachings. The Quaker immigrants to America are among the most notable proponents of this early form of SRI, steering clear of investments in arms, warfare or slavery. The first SRI fund was initiated in 1928 when evangelical Protestants founded the Pioneer Fund. This was a special fund avoiding investments in companies that produced liquor, cigars, or cigarettes . the so-called %sin stocks+. and its purpose was to use investments as a vehicle for pursuing an ethical or political goal. Among other projects, the fund proactively campaigned against apartheid in South Africa and encouraged divestment from companies doing business in South Africa, thus exerting pressure for political change (Heal, 2008).

SRI in its current form was propelled into the mainstream investment arena in the USA around the late 1970s, as the Sullivan Principles (Heese, 2005: 730). Formulated in 1977 by Reverend Leon Sullivan, these were a set of principles to guide US companies doing business in South Africa, at a time when discrimination and segregation were entrenched SA government policies.

Companies endorsing the principles had to respect human rights and promote equal opportunity and fair competition *inter alia*. A number of companies were progressively encouraged to divest in South Africa until political reform had begun. These principles have since been adopted by numerous countries worldwide as the Global Sullivan Principles.

The scope of SRI has since shifted to mainstream risk management issues and protecting shareholder value. SRI is essentially an investment strategy that attempts to balance financial return with social good. It is an indicator of which companies are well governed, an important requirement for investors according to an opinion survey conducted by McKinsey in 2000 (Heese, 2005: 731).

The SRI movement has grown from strength to strength and today includes non-profit organizations, religious groups, universities, hospitals, pension funds, individuals and corporations. The aim is to use their collective influence as investors to inspire positive social and environmental change. As investors go, they are interested in getting good returns on their investments, but what separates them from conventional investors is that they do not pursue financial gains at the expense of their social and environmental principles (Gezcy *et al.*, 2005). It has been postulated that investors engaged in SRI are motivated by two objectives. The %feel good+ investors are reassured by the fact that their money is put to work in a manner that is more or less aligned with their own beliefs, while the %social change+ investors wish for their funds to achieve positive change in society.

The SRI movement consists of three strategies. The first is screened funds. There are a number of different social screens applied to these funds, depending on whether they include or exclude target companies on the basis of a defined set of criteria. Exclusionary screens include the aforementioned tobacco, alcohol and gambling industries, while inclusionary screens focus on a company's positive environmental track record, dealings with communities and other minority groups. Thus managers of these funds will include in their portfolios, firms manufacturing safe products and demonstrating respect for human rights, whilst avoiding those with reproachable business practices. In other words, these investments are directed at companies that meet certain social and environmental criteria (Heal, 2008).

The second strategy is shareholder advocacy. This is the process whereby shareholders use their rights to lobby a company's management for policies that conform to social and environmental goals. Whereas pure SRI involves avoiding investing in companies with which one may disapprove, shareholder advocacy and activism implies buying shares in a company of exactly that description, in order to effect change in its policies. The corporation is engaged in a dialogue on a variety of issues, in an attempt to steer it on a course to maintain or improve financial performance while realigning it with the priorities of the shareholders. This process of shareholder advocacy or activism has been defined by O'Rourke (2002) as involving the following activities:

- Corporate engagement

- Shareholder resolutions

- Proxy voting

- Divestment

How much change can be effected by shareholder activism is discussed further in the same paper, but it is described as a valuable strategy in striving towards better corporate governance and sustainability (O'Rourke, 2002).

The third strategy is community investment. This is a strategy that provides access to funds to low-income communities who may not be able to do so through conventional methods. Thus capital is made available for projects such as small business, child care and affordable housing. An example of such is the Community Reinvestment Act of the United States, which prescribes a degree of community investment by those financial institutions that operate in minority communities (Heal, 2008).

2.6.2 Performance of SRI

The common assumption among critics is that investment decisions are made solely on the basis of a firm's financial data . its current and past earnings and share prices, data about its equity and debt, the volatility of its share price and earnings, and the correlations between these and the market as a whole. This

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perspective leaves no room for social and environmental performance as an input to investment decisions (Bauer *et al.*, 2002).

There is ongoing discussion with regard to the performance of SRI funds versus their conventional counterparts, and many authors agree that the literature does not provide a definitive answer (Richardson *et al*. 1999). However, new research suggests a slight performance advantage in the SRI fundsq favour. This is supported by the tremendous growth seen in the social investment industry, a phenomenon largely believed to be consumer-driven. In the period 1995 . 1999, Schueth (2003) recorded that professionally managed assets in this sphere displayed a 238 percent growth rate against a market rate of 133 percent (Schueth, 2003). In dollar terms, this represents an increase from US$ 162 billion to US$ 1,5 trillion.

According to the Social Investment Forum, from 1995 to 2003, assets involved in social investing grew 40 percent faster than all professionally managed investment assets in the United States. Investment portfolios involved in SRI grew by more than 240 percent from 1995 to 2003, compared with the 174 percent growth of the overall universe of assets under professional management during the same time period (see Figure 2).

Supporting these observations are the findings of Van de Velde *et al.* (2005), who determined that SRI portfolios slightly outperformed conventional funds, and that the difference in performance could be even greater in the long term. Using the market factor, size and price-to-book value variables as determinants of

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financial performance, their results initially showed that SRI funds were more volatile and underperformed relative to their conventional counterparts. However, after further statistical analysis and accounting for financial characteristic differences among the studied portfolios, they concluded that high sustainability-rated portfolios do indeed outperform low-rated portfolios (Van de Velde *et al.,* 2005).

Figure 2: Growth of SRI Funds in the US (1995 . 2005)
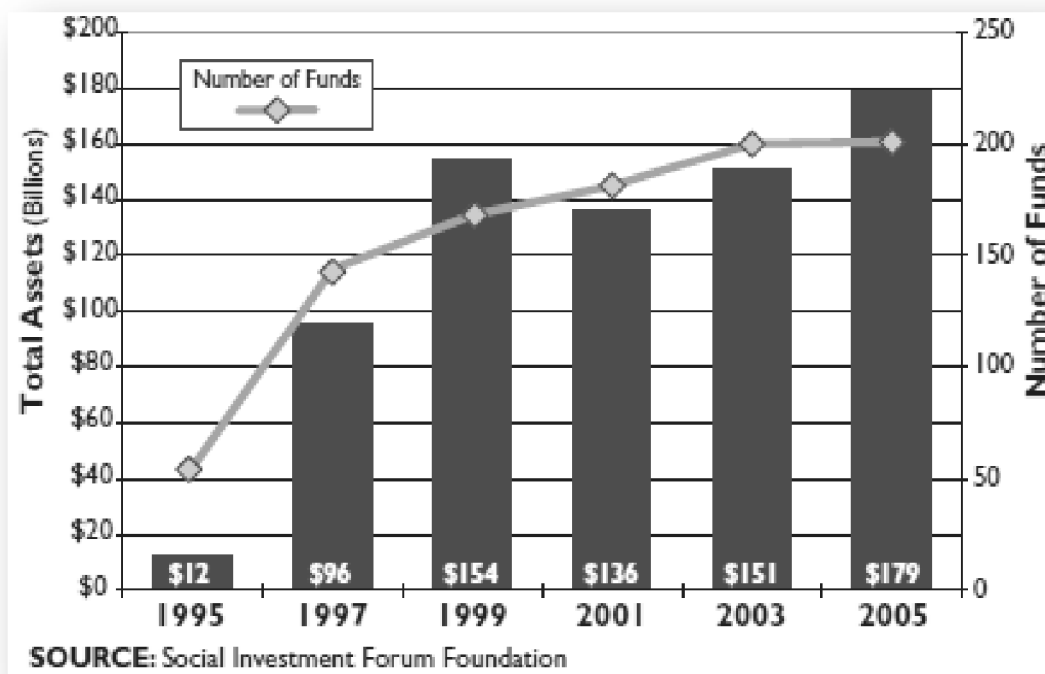
Further to this, Hong and Kacperczyk (2006) found that when firms within a sector are divided into high and low-ranked firms according to social and environmental screening criteria, those in the high-ranked group usually perform better financially than those that are low-ranked. This was supported by Kempf

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and Osthoff (2007) who found in their study that a trading strategy based on socially responsible ratings yielded "abnormally high returns" of up to 8,7 percent per year (Kempf, 2007).

But is it really that simple? Can an investor increase performance by employing a trading strategy based simply on buying high SRI rating stocks and selling those with low SRI ratings? The literature confirms that the performance of SRI funds is significantly complex and cannot be unpackaged in such basic terms.

Guerard (1997) and Sauer (1997) found that when comparing SRI mutual funds to similar conventional funds, the returns were in fact very similar. Statman (2000) went on to conclude, after his analysis over a nine-year period, that SRI funds' performance "gives no reason for either delight or alarm" (Statman, 2000). Perhaps more significant, in their analysis of some of the UK's Top 100 companies, in the period 1988 . 1997, Murray *et al.* (2006) could find no statistically significant direct relationship between share returns and environmental and social disclosure (Murray *et al.,* 2006). However, they were able to conclude that their longitudinal analysis revealed "a convincing relationship" between consistently high returns and high disclosure.

Many factors affect the performance of a portfolio, not least of which is the skill of the portfolio manager in picking stocks and sectors and "in deciding when to be in cash and when in securities" (Heal, 2008). That is to say, that if the best managers go into running conventional funds, those funds may well then perform better, even if the underlying investment trends favour SRI funds.

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Another aspect to consider is that SRI fundsq avoidance of companies that pollute, or are involved in arms manufacture, tobacco or alcohol, could mean that the portfolios of SRI funds are over-weighted, relative to the standard indices. Stocks such as Microsoft, Intel and Cisco, all of which are relatively untainted by environmental or social ills, are precisely the stocks that showed spectacular growth from the mid-nineties to the end of the century. Therefore the outperformance of SRI funds could be explained by their being overweight in technology stocks, which does not necessarily provide a basis for expecting continued superior performance by these funds (Heal, 2008).

It becomes clear that there is a growing body of literature that supports the finding that portfolios with higher social and environmental ratings perform better, and it can be summarised as follows (Heal, 2008):

- Superior environmental performance is correlated with high values for the price-to-book value ratio. This suggests that good social and environmental performance pays, but does not prove it categorically.

- SRI funds do not significantly underperform compared to non-SRI funds. This suggests that if there are costs . as opposed to benefits . from social and environmental programmes, then they must be insignificant.

- SRI funds may have a small performance edge over their competitors, but this is a speculative statement since the performance data is dominated by SRI funds that were heavily overweight in high-performing growth stocks during the 1990s. Another speculative conclusion is that taking

into account CSR information can improve the performance of a portfolio of any type, SRI or not.

SRI is now a clearly significant factor in capital markets and in 2003, a total of US$ 2.16 trillion in assets was invested in professionally managed portfolios using one or more of the three SRI strategies . screening, shareholder advocacy, and community investing. This figure of US$ 2.16 trillion accounted for 10 . 12 percent of the total investment assets under professional management in the United States in 2003 (Social Investment Forum, 2005).

2.6.3 FTSE/JSE SRI Index

The South African FTSE/JSE SRI Index was launched in May 2004. It comprises shares of companies that have integrated the sustainability principles into their business practices and was the first of its kind in an emerging market. (Heese, 2005:733). It was formulated in response to growing interest in socially responsible investing worldwide.

The key objectives are as follows (JSE, 2009):

- To identify JSE listed companies that integrate the principles of good governance into their business activities, as well as those of the triple bottom line;

- To provide a tool for holistic assessment of company policies against globally aligned and locally relevant corporate responsibility standards;

- To serve as a facilitation vehicle for responsible investment for investors looking for non-financial risk variables to include in investment decisions; and

- To contribute to the development of responsible business practice in South Africa and beyond.

The JSE SRI index is founded on the principles of Hammondϕ triple bottom line – namely environmental, social and economic sustainability – underpinned by good corporate governance. The index is calculated and published at the end of each working day by the Financial Times Stock Exchange (FTSE). In order to be eligible for inclusion in the index, a company must meet the following standards:

- It must be a constituent of the FTSE/JSE All Share Index at completion of the annual review of the JSE SRI Index

- It must meet one of the following established criteria:

  - Automatic assessment – following a quarterly review of the FTSE/JSE indices in March of the relevant year:

    - Companies that are already constituents of the preceding yearϕ JSE SRI Index, while remaining constituents of the All Share Index

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- Companies in the FTSE/JSE Top 40 index

- Companies in the FTSE/JSE Mid Cap Index

o Voluntary assessment:

- Companies that are constituents of the FTSE/JSE Small Cap Index

- Companies in the All Share Index which meet the pass requirement at the annual review date

The annual review of listed companiesqpolicies by the JSE, to ensure that they remain aligned with global standards as well as the issues particular to the South African economy, is conducted in November. It is based on data provided by the international group Ethical Investment Research Services (EIRIS), gathered from a variety of news sources. Significant stories include reports on serious or systematic human rights violations, labour issues, environmental damage, fraud and corruption as well as serious violations of fundamental ethical norms *inter alia*. The JSE SRI Advisory Committee is comprised of independent investment professionals and experts in the social responsibility and sustainability field, and oversees these annual reviews as well as ensures that best practice measures are employed in the management of the JSE SRI Index.

Added to this, the companies must meet a required number of indicators set out in each area of measurement. They are split into two groups of indicators: core and desirable indicators. Core indicators represent the bare minimum that

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companies should contain, while desirable indicators can be seen as approaching %best practice,+ and are intended to guide companies in identifying the relevant issues they need to address.

Notwithstanding the need to be in harmony with the global community, the JSE SRI criteria still recognise the need to remain locally relevant. Two aspects of the social criteria in particular standout in this regard: with regard to multinational corporations and those companies operating in areas of high HIV/AIDS prevalence.

For multinational corporations, the SRI Index requires the company to demonstrate that its core set of principles adheres to globally accepted obligations, and that they should be applied across all spheres of operation. For those operations occurring within South African borders, at the very least, South African principles should be adhered to. Added to this, the policy of Black Economic Empowerment applies strictly to companies with only South African operations. Companies with operations in areas of high HIVAIDS prevalence are required to meet the core social criteria pertaining to this epidemic. These criteria are summarised in Table 2 and Table 3.

Notwithstanding Heeseos (2005: 729) affirmation that sustainability practices have yet to be fully evolved in South Africa, measures are in place to incrementally align the JSE SRI with its global counterparts. The SRI Index criteria are continuously evolving to align more closely with international benchmarks such as FTSE4Good.

Table 2: JSE SRI Social Criteria Indicators - BEE

BLACK ECONOMIC EMPOWERMENT (BEE)		
Criteria Theme	**Core indicators**	**Desirable indicators**
Policy	• Demonstrated commitment to BEE	• Where targets achieved, commitment to monitor/maintain compliance or review achieved targets on a regular basis
Management/Performance	• Documented targets for preferential procurement, ownership & control and workforce composition (in line with industry standard/charter/code of good practice) • Systems to monitor performance against targets (e.g. internal/external audits of scorecard) • Performance against specific targets	• Number of black persons participating in learnerships or other skills development programmes
Reporting	• Targets in <u>two or more of</u> preferential • Systems to monitor performance • Performance against targets	• Learnerships or skills development programmes for black persons • Commitment to maintain or review achieved targets

Source: JSE and EIRIS, (2007). The JSE SRI Index: Background and Selection Criteria

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Table 3: JSE SRI Social Criteria . HIV/AIDS

HIV/AIDS		
Criteria Theme	**Core indicators**	**Desirable indicators**
Policy	• Existence of HIV/Aids policy (covering at a minimum confidentiality, non-discrimination and commitment to develop/implement programmes for treatment/prevention)	• Global applicability
Management/Performance	• Evidence of risk assessment in relation to HIV/Aids • Prevention, education and awareness programmes for employees • Access to voluntary counseling and testing for employees	• Documented objectives and targets for addressing direct impact of HIV/Aids • Strategies to address indirect business risks of HIV/Aids e.g. effect on customer base/supply chain) • Occupational health & safety training/procedures covering prevention of transmission of HIV • Provision of treatment, care and support benefits for employees (directly or indirectly through providing access or facilitating government programmes in countries where these are available/effective) • Sponsorship of/support for community-based prevention, education and awareness programmes • Sponsorship of/support for community-based treatment, care and support
Reporting	• Existence of policy • Evidence of risk assessment (disclosure of actual risk not required)	• Global applicability • Objectives and targets in relation to direct impacts • Strategies to address indirect impacts • Employee involvement, including programmes for prevention, education and awareness, access to counseling and testing, health & safety • Community involvement

Source: JSE and EIRIS, (2007). The JSE SRI Index: Background and Selection Criteria

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3. RESEARCH HYPOTHESES

3.1 Overview

The literature shows that CSR can affect a company's CFP in terms of both accounting-based and market-based measurements of CFP. This research elected to focus solely on the market-based measurements. The reasons for this decision are as follows:

- The FTSE/JSE SRI Index was only established in 2004, therefore an analysis of the performance of companies subscribing to this index cannot take a long-term view. Market-based ratios are more revealing than accounting-based ratios about a company's expected future performance as well as taking the historical performance into account.

- Accounting-based measurements are backward looking and do not give an indication of the company's expected future performance. Market-based measurements, on the other hand, are influenced by investor sentiment and would therefore take account of the company's future outlook.

- CSR consists of many dimensions and it is virtually impossible to isolate CSR activities in a company's financial statements. CSR may affect a company's profitability in as far as it can minimise expenditure on adverse forms of energy and grant the firm access to new markets (Ambec *et al.*, 2008) *inter*

alia; however, similar results could be achieved through other means such as operational efficiency and marketing efforts, even if the company is not sustainable. Market-based measurements reflect both the company's expected future profitability and other aspects such as reputation, brand, corporate governance and sustainability, which are all linked to CSR.

- Market-based measurements are more likely to reflect the company's CSR policies and programmes in the form of risk, in that they limit the social and environmental exposure of the firm. In this way, investment in sustainable companies should be more attractive.

The market-based measurements that were selected to assess the Corporate Financial Performance of the sampled organisations were: average market return, price/book value ratio and price/earnings ratio. These particular measurements were deemed the most appropriate for the reasons provided in section *4.1 Overview*.

In order to determine whether there is a correlation between the CSR and CFP of South African listed companies, and combining the research objectives with the literature reviewed, the following research hypotheses were investigated.

3.2 Hypothesis 1

The first research objective was: To determine the market performance of the FTSE/JSE SRI Index (SRI) relative to the FTSE/JSE All Share Index (ALSI), in terms of average market returns (AMR).

The null hypothesis associated with this objective was: There is not a significant difference between the AMR of the SRI and the AMR of the ALSI.

The alternative hypothesis associated with this objective was: The AMR of the SRI is significantly more or less than the AMR of the ALSI.

Thus:

$H1_0$: AMR_{SRI} . $AMR_{ALSI} = 0$

$H1_A$: AMR_{SRI} . $AMR_{ALSI} \neq 0$

3.3 Hypothesis 2

The second research objective was: To determine the average market performance of companies listed on the SRI relative to those companies listed on the JSE Main Board, but not on the SRI, in terms of average price/book value ratios (PBR).

The null hypothesis associated with this objective was: There is not a significant difference between the average PBR of companies listed on the SRI and the average PBR of companies listed on the JSE Main Board, but not on the SRI.

The alternative hypothesis associated with this objective was: The average PBR of companies listed on the SRI is significantly more or less than the average PBR of companies listed on the JSE Main Board, but not on the SRI.

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Thus:

$$H2_0: PBR_{SRI} \ . \ PBR_{MB} = 0$$

$$H2_A: PBR_{SRI} \ . \ PBR_{MB} \neq 0$$

3.4 Hypothesis 3

The third objective was: To determine the average market performance of companies listed on the SRI relative to those companies listed on the JSE Main Board, but not on the SRI, in terms of average price/earnings ratios (PER).

The null hypothesis associated with this objective was: There is not a significant difference between the average PER of companies listed on the SRI and the average PER of companies listed on the JSE Main Board, but not on the SRI.

The alternative hypothesis associated with this objective was: The average PER of companies listed on the SRI is significantly more or less than the average PER of companies listed on the JSE Main Board, but not on the SRI.

Thus:

$$H3_0: PER_{SRI} \ . \ PER_{MB} = 0$$

$$H3_A: PER_{SRI} \ . \ PER_{MB} \neq 0$$

4. RESEARCH METHODOLOGY

4.1 Overview

The aim of the study was to determine whether Corporate Social Responsibility has an impact on the Corporate Financial Performance of South African listed firms. One school of thought believes that sustainability comes at an additional cost to companies and erodes profitability and market performance, whereas another school argues that the financial benefits of sustainability outweigh the costs. Investor confidence was identified as one of the financial benefits of sustainability. The study aimed to test whether there is any evidence on the JSE stock market that sustainability has any impact whatsoever on a South African company's stock market performance, be it positive, negative or nil.

The JSE has developed a host of indices that can be used as benchmarks to measure the performance of the major capital and industry segments of the African market. The FTSE/JSE All Share Index (ALSI) falls under the Headline Indices category of the FTSE/JSE Africa Index series, which replaced the JSE Actuaries Indices in June 2002. The ALSI represents 99% of stocks listed on the JSE by market capitalisation. In turn, the FTSE/JSE SRI Index (SRI) is constructed against the base universe of the ALSI (JSE, 2004).

Two variables were tested, namely Corporate Social Responsibility and Corporate Financial Performance, where CSR was the independent variable and CFP the dependent variable.

CSR was a categorical variable measured by a company's listing on the SRI. The companies that are listed on the SRI were regarded as sustainable and the companies that are not listed on the SRI were regarded as non-sustainable. The criteria that companies have to satisfy in order to qualify for a listing on the SRI were discussed in *2.6.3 FTSE/JSE SRI Index.*

Market performance was a numerical, continuous variable measured using average market return and two selected ratios: price/book value ratio and price/earnings ratio. It was believed that these ratios would reveal whether investors are willing to pay a premium for sustainable firms, or whether they are deterred from investing in such companies.

Average market return (AMR) refers to the change in a company's market value between two periods, usually measured as a function of share price or market capitalisation per company.

$$AMR = \frac{\text{Opening Share Price in Year i } (P_i)}{\text{Opening Share Price in Year i-1 } (P_{i-1})} \quad . \quad 1$$

An index represents a summation of these AMR values, reflecting the collective returns of the category of organisations that are constituents of the index in question. High AMR values reflect growth of a company's stocks and are commonly attributed to investor confidence in the sustained growth of the company.

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The price/book value ratio (PBR) measures the market value of a company's shares relative to the book value of its equity:

$$PBR = \frac{\text{Market value of equity } (P_0)}{\text{Book value of equity } (BV_0)}$$

If the market value of a company's equity is equal to its book value, then the PBR will be one. Some of the factors that can contribute to the market value of equity being greater than the book value are patents, goodwill and brand name. The PBR can also be seen as a function of Return on Equity (ROE) relative to the firm's cost of equity (K_e) and the ratio would be one if ROE and K_e were equal. But if ROE is larger, then it is a growth company and the ratio is greater than one, indicating that investors are willing to pay a premium over book value for the stock (Reilly & Brown, 2003).

The price/earnings ratio (PER) is one of the most commonly used metrics to assess equities (Kriek & Beekman, 2002). The ratio is obtained by dividing the current share price by reported earnings per share:

$$PER = \frac{\text{Market price per share } (PPS)}{\text{Earnings per share } (EPS)}$$

This ratio is often used to identify companies whose shares seem under- or over-valued relative to the market as a whole. The PER reflects investor optimism and pessimism (Jones, 2000).

The PER is typically an indication of:

1. the growth potential of the company, as perceived by the market; and

2. the risk perception of the company by the market.

Therefore, higher PER values for the SRI listed companies would reflect that investors expect the companies to achieve higher growth than non-SRI listed companies in the future. Low growth companies tend to trade at lower PERs while high growth companies trade at higher PERs. Similarly, higher risk companies trade at lower PERs than low risk companies (Kriek & Beekman, 2002). Therefore higher PER values for the SRI listed companies would reflect that investors perceive them as safer investments. Conversely, if the SRI listed companies had lower PER values, it would indicate that investors do not have faith in their future earning potential or perceive them as riskier investments.

Of course the growth potential and risk profiles of companies are intrinsically linked to the industries in which they operate. For this reason, PBRs and PERs of companies have to be assessed relative to companies within the same industry. However, splitting the company data into the respective industries in this study, resulted in very granular samples, with the effect that most sample sizes were below the statistical requirement of 30. It was instead observed that industry representivity within both the SRI and non-SRI categories was fairly similar, save for a few sectors. The decision was made to compare these ratios across the various industries.

The research method that was deemed most appropriate to investigate the research hypotheses (subject to stated limitations) was selected.

4.2 Research Design

The research methodology took a quantitative, descriptive approach, examining the relationship between CSR and the financial, specifically stock market, performance of listed companies.

No attempt was made to establish causality between the two variables, given that the relationship is extremely complex and governed by a multiplicity of factors that extend well beyond the scope of this research. For the purpose of this study, it would be sufficient to establish that there was indeed a correlation between the said variables. This should pave the way for future studies aiming to investigate whether there is any causality between CSR and CFP, and the direction thereof.

The research took place in the following stages:

1. A list of all companies that are listed on the JSE Main Board was obtained.

2. A list of all companies that are listed on the ALSI was obtained.

3. A list of all companies that are listed on the SRI was obtained.

4. The monthly closing values of the ALSI and SRI over the past six and a half years (since the inception of the SRI) were obtained.

5. Mathematical and statistical analyses were conducted to determine whether there was a significant difference between the respective AMRs of the SRI and the ALSI.

6. The PBR and PER values of both the SRI listed and the JSE Main Board (excluding SRI) listed companies were obtained.

7. Statistical analysis was conducted to determine whether there was a significant difference between the PBR and PER values of SRI listed and non-SRI listed companies on the JSE Main Board.

4.3 Unit of Analysis

The unit of analysis is the level at which the data is collected and the analysis conducted, be it organisational, departmental or individual, *inter alia* (Zikmund, 2003:96)*.* It is the major entity that is being analysed.

In order to test the research hypotheses, two different units of analysis were used, as were deemed appropriate for each hypothesis:

- **Hypothesis 1**: The unit of analysis for this hypothesis was the index. A total of two indices were analysed for performance, namely the SRI and the ALSI.

- **Hypotheses 2 and 3**: The unit of analysis for these hypotheses was the individual listed company whether a constituent of the SRI or only listed on the JSE Main Board.

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4.4 Population

A population is defined as "a complete group of entities sharing some common set of characteristics" (Zikmund, 2003:739). The population of relevance for this study can be regarded in two ways:

1. The study investigated the financial performance of all the companies listed on the JSE. Therefore, since this entire population of JSE constituents was selected for analysis, the population of this study can be regarded as all the companies listed on the JSE Main Board, including those that are additionally constituents of the ALSI and SRI indices.

2. The study indirectly revealed outcomes that may be applicable to the universe of companies in South Africa, whether they are listed on the JSE Main Board or not (although this was not formally inferred). Therefore, the population of this study can be regarded as all South African companies, of which the JSE constituents are merely a convenient sample.

For the purpose of this study, the population of relevance will be limited to all the companies that are listed on the JSE Main Board, including those that are additionally constituents of the ALSI and SRI indices.

An exhaustive list of the organisations that were listed on the JSE Main Board, ALSI and SRI, at the time of writing (October 2010), is provided in Appendix 1.

4.5 Sampling Method and Size

The target population is readily accessible from the JSE website. The sample units are clearly identifiable as belonging to the three categories: JSE Main Board, ALSI, and SRI, as they are listed under the relevant indices. The only criterion that companies had to meet in order to qualify for the study, was that they had to be listed on the JSE Main Board, the ALSI and/or the SRI. Companies were disqualified only on the basis of unavailability of their financial data on the McGregor Bureau of Financial Analysis (BFANet) research domain.

In line with the above definition of population of relevance for this study, the entire population of relevance was sampled, which is akin to a census. However, since the data was stratified into various categories, namely: JSE Main Board (less SRI constituents), ALSI, and SRI; these categories can be seen as the respective strata. The sampling method then is consistent with stratified sampling, where the members of each category are more or less equal on some characteristic (Zikmund, 2003:386).

At the time of writing, there were 344 companies listed on the JSE Main Board, of which 166 were constituents of the ALSI and 71 were additionally constituents of the SRI. The sampling frame comprised every one of these companies.

- **Hypothesis 1**: The population of relevance for this hypothesis is the ALSI. The SRI is a subset of the ALSI. There was therefore a duplication of the test units that are constituents of both the SRI and the ALSI. In the first step, the SRI was compared to the ALSI. However, it became apparent that the SRI

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constituents formed too large a proportion of the ALSI, such that the performances of the indices were not significantly different. Therefore, in the second step, the SRI constituents were manually removed from the ALSI and an ALSI less SRI index was reconstructed from scratch. This resulted in the formation of two new samples whose market performances were compared, namely the SRI index and the ALSI less SRI index. Table 4 tabulates the resulting change to the number of constituents of the ALSI following this adjustment.

Table 4: Number of Constituents per Index as at September 2010

INDEX	# CONSTITUENTS
SRI	71
ALSI	166
ALSI less SRI	95

- **Hypotheses 2 and 3**: The population of relevance for these hypotheses is all the companies listed on the JSE Main Board. The SRI consists of companies from the JSE Main Board. The SRI constituents were manually removed from the JSE Main Board list, resulting in two samples, namely SRI constituents and non-SRI constituents. The sample of 71 SRI constituents was compared to the remaining 273 non-SRI constituents.

The market ratios used in the data analysis are industry specific; therefore, it is important to provide background on the industry classification method used. Companies were allocated to industries based on the Industry Classification Benchmark (ICB), which was developed by Dow Jones and FTSE. The ICB

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segregates markets into macroeconomic sectors, using a system of 10 industries, divided into 20 supersectors, which are broken down into 41 sectors, which contain a further 114 subsectors. In order to strike a balance between the need to group like companies together under the same sector, and the limits to the granularity of data allowed by the rules of statistical analysis, the second tier of 20 supersectors was used. Only one supersector, Utilities, was excluded as it was not represented on the JSE Main Board.

The distribution of industries represented among the SRI and non-SRI companies on the JSE Main Board is presented in Table 5, Figure 3 and Figure 4.

Table 5: Distribution of Sample Observations by Industry

Industry	JSE-SRI		JSE-Non-SRI		Total Sample	
	No. of Companies	%	No. of Companies	%	No. of Companies	%
Automobiles & Parts	0	0	12	0.8	12	0.7
Banks	30	7.6	12	0.8	42	2.3
Basic Resources	114	28.8	252	17.7	366	20.1
Chemicals	12	3	24	1.7	36	2
Construction & Materials	24	6.1	96	6.8	120	6.6
Financial Services	24	6.1	108	7.6	132	7.3
Food & Beverage	30	7.6	78	5.5	108	5.9
Health Care	12	3	30	2.1	42	2.3
Industrial Goods & Services	30	7.6	252	17.7	282	15.5
Insurance	36	9.1	18	1.3	54	3
Investment Instruments	0	0	60	4.2	60	3.3
Media	0	0	36	2.5	36	2
Oil & Gas	6	1.5	12	0.8	18	1
Personal & Household Goods	6	1.5	36	2.5	42	2.3
Real Estate	6	1.5	150	10.5	156	8.6
Retail	36	9.1	84	5.9	120	6.6
Technology	0	0	102	7.2	102	5.6
Telecommunications	24	6.1	6	0.4	30	1.7
Travel & Leisure	6	1.5	54	3.8	60	3.3
Total	**396**	**100**	**1422**	**100**	**1818**	**100**

**Figure 3:** Number of JSE SRI Companies by Industry
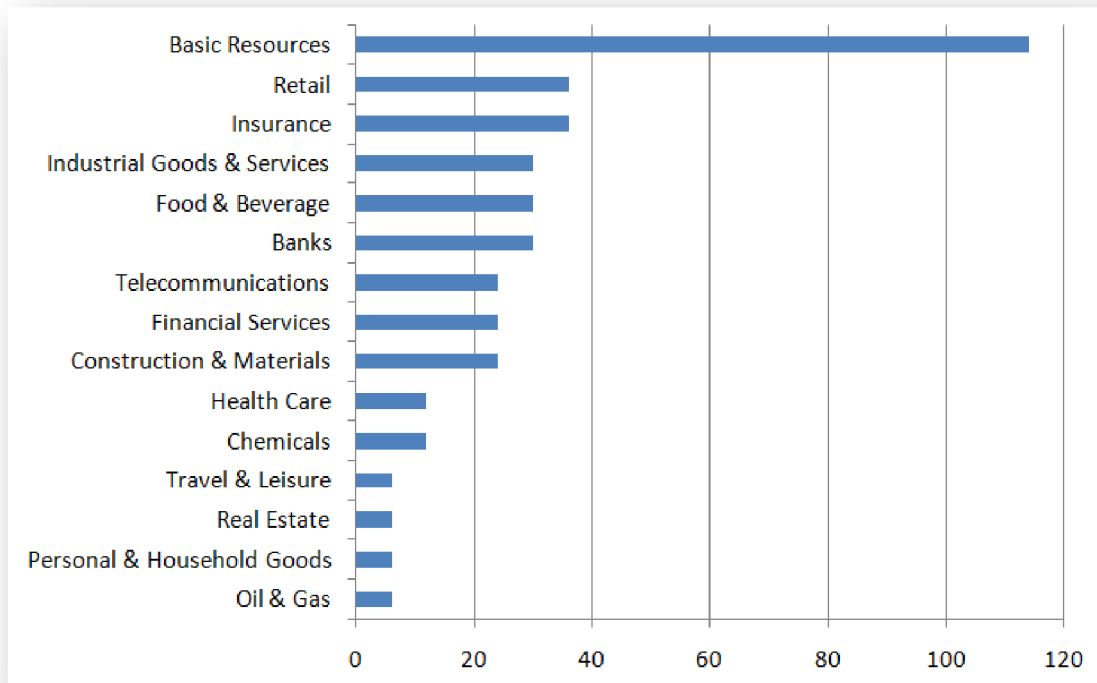
**Figure 4:** Number of JSE non-SRI Companies by Industry
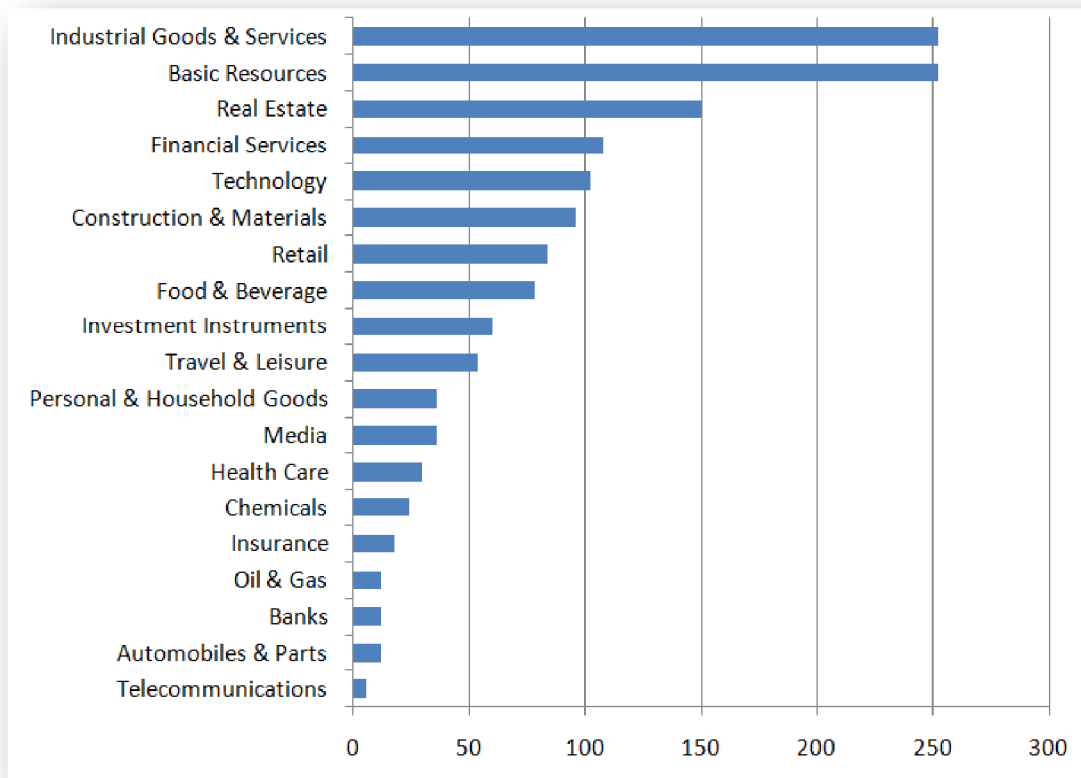
Table 5 shows that 22% of the selected sample was composed of companies listed under the SRI index. A large majority (78%) are non-SRI companies. Some industries were not represented in the SRI sample. These were Automobile & Parts, Investment Instruments, Media and Technology. All of these industries were represented in the non-SRI sample.

It can be seen from Figure 3 that among the SRI companies, the basic resources industry was the most commonly represented comprising almost a third of the sample (29%). The rest of the sample was almost evenly distributed among several industries excepting the aforementioned Automobile & Parts, Investment Instruments, Media and Technology sectors, which were not represented among the SRI companies.

Figure 4 shows that among the non-SRI companies in the sample, both the basic resources and industrial goods and services were dominantly represented. Each comprises 18% of the sample or more than a third combined. The least represented industry was Telecommunications.

4.6 Data Collection

The first step of the data collection for this research entailed obtaining the monthly closing values of the SRI and ALSI, respectively, between May 2004 (the inception of the SRI) and September 2010 (the most recent data available). The closing values were obtained from the JSE.

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Once the data analysis was underway, it became apparent that the index closing values required some adjustment. At this point, two additional indices were considered, namely SRI Shareholder Weighted Index (SWIX) and ALSI SWIX, as elaborated in *4.7 Data Analysis*. The monthly closing values of these indices were also obtained from the JSE.

The second step entailed accessing the list of all the companies that are listed on the JSE Main Board as well as those that are additionally constituents of the SRI. Both lists were obtained from the JSE website. Since there was duplication in the case of companies that are listed on the JSE Main Board as well as being constituents of the SRI, the SRI constituents were manually removed from the JSE Main Board list, for the purposes of conducting an objective comparison between SRI listed companies and those that are not listed on the SRI.

The relevant financial ratios for each of these companies were obtained from McGregor's Bureau of Financial Analysis (BFANet) database, a subscription service supplying real-time and historical financial information on South African listed companies.

4.7 Data Analysis

According to Zikmund (2003:473), the process of data analysis entails summarising large quantities of raw data so the results can be interpreted. The aim of data

analysis is to reveal any consistent patterns in the data so the results may be studied and interpreted in a brief and meaningful way.

Analysis of the financial data collected in this study followed a number of steps. The data collected for the purpose of testing each of the research hypotheses was analysed as follows:

- **Hypothesis 1**: The ALSI and SRI closing index values were tabulated and each indexed to a starting value of 100. From this table, a time-series chart was plotted of the cumulative share price returns of the ALSI relative to the SRI. The chart revealed qualitatively the relative performance of SRI against ALSI throughout the study period of May 2004 to September 2010.

  Additionally, a price-relative curve was plotted (including its associated trendline), which represented the quotient of the SRI closing values divided by the ALSI closing values. The slope of this curve (trendline) revealed qualitatively and quantitatively whether SRI was earning better or worse average market returns (AMR) than ALSI. A horizontal slope or gradient of zero would reflect that the AMR values were equal, while a positive or negative slope would reflect that the SRI had over- or under-performed, respectively, relative to the ALSI. A q-value was also computed, based on the mean price relative value. A q-value of one, would reflect that the AMR values of the SRI and ALSI indices were equal, while q-values greater than or less than one, would reflect that the SRI had over- or under-performed,

respectively, relative to ALSI. A q-value much greater than or much less than one, would reflect that the SRI had greatly over- or under-performed.

In the next step of analysis, parametric statistical tests were carried out to calculate the AMRs of the SRI and ALSI indices, and to determine whether there was a significant statistical difference between them at the 5% significance level. The two sample t-tests were conducted using the statistical package, NCSS 2007.

During the course of the data analysis, it became apparent that the index closing values required some adjustment. The ALSI, and thereby the SWIX, are heavily weighted towards the resources sector, which makes up approximately 40% of the index and has disproportionately large exposure to foreign shareholding. To this end, it was decided that the JSE Shareholder Weighted Index (SWIX) closing values would be used. The Shareholder Weighted Indices were introduced to the FTSE/JSE Africa Index series in July 2003 in response to market demand for indices with limited company weightings (JSE, 2004). The SWIX objectively downscales the overweight stocks and adjusts foreign held free float to reflect the available domestic investible universe of shares.

While the ALSI SWIX closing values were available, it emerged that the SRI SWIX was only launched in December 2009. Therefore, the SRI SWIX closing values were not available for the entire study period of May 2004 . September 2010.

However, since the SRI is a subset of the ALSI, each of the SRI listed companies appeared in the ALSI SWIX with associated SWIX weighting values. These weights were then used to manually construct an SRI SWIX dating back to the inception of the SRI. It was the intention of the study to reflect the AMRs of the sampled companies as accurately as possible. For this reason, the dividend yield percentages of each of the constituent companies was also taken into account. This provided a close approximation of the total return to investors.

The index calculations were based on the following equation:

$$\text{Market Value}_i = [\text{MCap}_i + (\text{DY\%}_i \times \text{MCap}_{i-1})] \times W_{\text{SWIX}(i)}$$

where:

MCap_i = the gross market capitalisation of a company in period i

MCap_{i-1} = the gross market capitalisation of a company in the period preceding period i

$\text{DY\%}_i$ = the dividend yield percentage of a company in period i

$W_{\text{SWIX}(i)}$ = the SWIX weight of a company in period i

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The calculated market values for each company were added to obtain the total market value for the entire index for each month from May 2004 until September 2010. These total index values were then indexed to a base value of 100 and a time-series chart plotted to reflect the cumulative total return, based on the change in the total index values from one month to the next.

In the interests of maintaining a consistent approach, the ALSI SWIX was also reconstructed using the same method as for the SRI SWIX.

Furthermore, in order to accurately test the performance of the SRI index relative to a benchmarked non-SRI index, it was also necessary to reconstruct the ALSI without the influence of the SRI constituents. To this end, the SRI constituents were manually removed from the ALSI and a new index was constructed by adding the calculated total market values of the remaining list of companies in the ALSI (less SRI). The change in total market value of the index from month to month, was used as a proxy for AMR.

- **Hypothesis 2**: The SRI and JSE Main Board annual price/book value ratios (PBR) throughout the study period (2004 . 2009) were tabulated. From this table, a time-series chart was plotted, which qualitatively highlighted the relative performances of the SRI and the JSE Main Board in terms of PBR values.

In the next step, parametric statistical tests were carried out to determine whether there was a significant difference between the PBR values of the SRI and those of the JSE Main Board. The specific test used was the Analysis of Variance (ANOVA) F-test and the statistical package used to conduct these tests was SPSS, version 18.

- **Hypothesis 3**: The SRI and JSE Main Board annual price/earnings ratios (PER) throughout the study period (2004 . 2009) were tabulated. From this table, a time-series chart was plotted, which qualitatively highlighted the relative performances of the SRI and the JSE Main Board in terms of PER values.

In the next step, parametric statistical tests were carried out to determine whether there was a significant difference between the PER values of the SRI and those of the JSE Main Board. The specific test used was the Analysis of Variance (ANOVA) F-test and the statistical package used to conduct these tests was SPSS, version 18.

4.8 Research Limitations

The research had the following limitations:

- The research did not take into account the presence of other operational or market factors that may have an effect on a company$ CFP irrespective of CSR.

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- Many of the listed companies on the JSE, and indeed mainly the larger ones, are linked to large multinationals that give those companies a significant advantage in terms of scale economies and reputation, which may have an effect on company stock market performance.

- The companies listed on the FTSE/JSE SRI Index are larger and more established organisations, which would inspire more investor confidence in any case.

- The JSE is dominated by companies of the Basic Resources sector, which significantly skews the overall market performance results in the direction of this sector's performance. For this reason, the results can be said to be unrepresentative of the market performance of companies across the entire spectrum of sectors.

- The FTSE/JSE SRI sector was only established in 2004, which meant that the study could not take a long-term view of the market performance of the SRI index and of SRI listed companies.

- The global economy, including South Africa's (albeit to a lesser extent), is still recovering from the effects of the global financial crisis of 2007 . 2010. This falls within the study period of 2004 . 2010, and casts a shadow of doubt over the credibility of this study's results. The study certainly cannot indicate the impact of CSR on CFP under normal economic conditions, excepting perhaps the initial period of 2004 . 2007, which is in itself a very short period.

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- The CFP metrics used in the study, namely: average market return, price/book value ratio and price/earnings ratio, have their own limitations and cannot of their own be regarded as the ultimate indicators of CFP. Additionally, CFP, as measured in this study, may be attributable to a myriad other factors, beyond a company's CSR performance.

- The research did not endeavour to rate the sustainability of companies as part of the study. Instead the FTSE/JSE SRI Index was used as a proxy for sustainability, whose rigour in scrutinising the sustainability of companies was not thoroughly investigated. This may bring the credibility of the inferences made in this study about sustainable companies' CFP into question. This method also did not enable a distinction to be made between varying degrees of corporate sustainability, which would have made it possible to establish the nature of regression between the two variables.

However, it is important to reiterate that this study seeks not to establish causality between CSR and CFP, but merely to investigate whether or not correlation exists.

5. RESULTS

5.1 Overview

This section presents the findings from the analysis described in Chapter 4 and evaluates whether the research hypotheses proposed in Chapter 3 are supported or refuted by the data. The results are arranged in accordance with each hypothesis, and appraise the outcomes of the analysis qualitatively and quantitatively, followed by a conclusion stating whether or not the null hypothesis can be rejected.

5.2 Hypothesis 1

The null hypothesis stated that there is not a significant difference between the AMRs of the SRI and the ALSI. The alternative hypothesis stated that the AMR of the SRI is significantly more or less than that of the ALSI.

5.2.1 SRI vs ALSI

The monthly closing values of the SRI and ALSI indices for the period May 2004 to September 2010, as well as a price relative curve based on the quotient of SRI returns divided by ALSI returns, were indexed to a base value of 100 and plotted on a time-series chart. The chart is displayed in Figure 5.

Figure 5: SRI vs ALSI Market Performance (2004 . 2010)
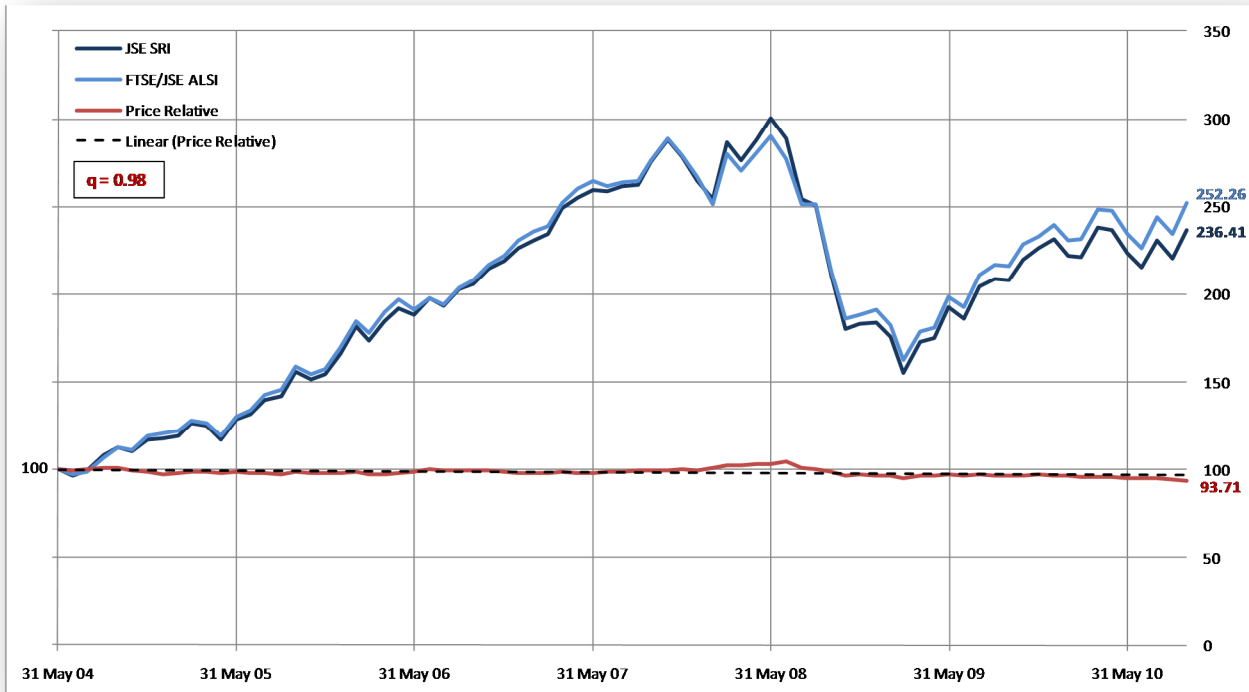
It can be observed on the chart that the SRI and ALSI cumulative returns are very closely matched and that the SRI slightly underperforms relative to the ALSI. This is evident in the price relative curve, which slopes downward, and confirmed by the q-value of 0.98 (less than 1). This result indicates that the ALSI outperforms the SRI.

As part of the statistical analysis, the mean AMRs and standard deviations of the SRI and ALSI indices were computed, and two sample t-tests were conducted to assess whether the mean AMRs were significantly different from one another. These results are displayed in Table 6 and Table 7.

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Table 6: Descriptive Statistics for SRI vs ALSI AMRs

Variable	Count	Mean	Std. Deviation
SRI AMR	77	0.0113	0.0577
ALSI AMR	77	0.0122	0.0535

Table 7: Aspin-Welch Unequal Variance T-Test for SRI vs ALSI AMRs

Alternative Hypothesis	T-Value	Probability Level	Reject H0 at .050	Power (Alpha=.050)
Difference <> 0	-0.0952	0.924252	No	0.051027
Difference < 0	-0.0952	0.462126	No	0.060566
Difference > 0	-0.0952	0.537874	No	0.040959
Difference: (SRI_Returns)-(ALSI_Returns)				

The mean AMR of the SRI was 0.0113 and the mean AMR of the ALSI was 0.0122. This confirms the qualitative observation that the ALSI appears to outperform the SRI. However, as to whether this difference is statistically significant at a significance level of 5% (alpha = 0.05), the t-test results show that there is not a significant difference. Therefore, the null hypothesis cannot be rejected and the null hypothesis stands. The conclusion is drawn that there is not a significant difference between the AMR of the SRI and the AMR of the ALSI.

However, in order to rule out the possibility that the index returns were disproportionately influenced by the resources sector and foreign investor behaviour, the closing values of the SRI SWIX and ALSI SWIX were obtained and subjected to the same analysis.

5.2.2 SRI SWIX vs ALSI SWIX

Since the SRI SWIX was only launched in December 2009, closing values for this index were not available for the earlier portion of the study period. However, since the SRI is a subset of the ALSI, the SRI constituent companies and their associated SWIX weighting values dating back to 2003 (when the ALSI SWIX was launched) were available. These were used to calculate the historical SRI SWIX using the method described in *4.7 Data Analysis*. To verify the accuracy of the historical SRI SWIX calculated as part of this study, the total market values in the latter period (December 2009 . September 2010), were compared to the existing FTSE/JSE SRI SWIX values. The results are displayed in Figure 6 and they reveal a high correlation between the index values of the two indices.

Figure 6: Ntoi SRI SWIX vs JSE SRI SWIX

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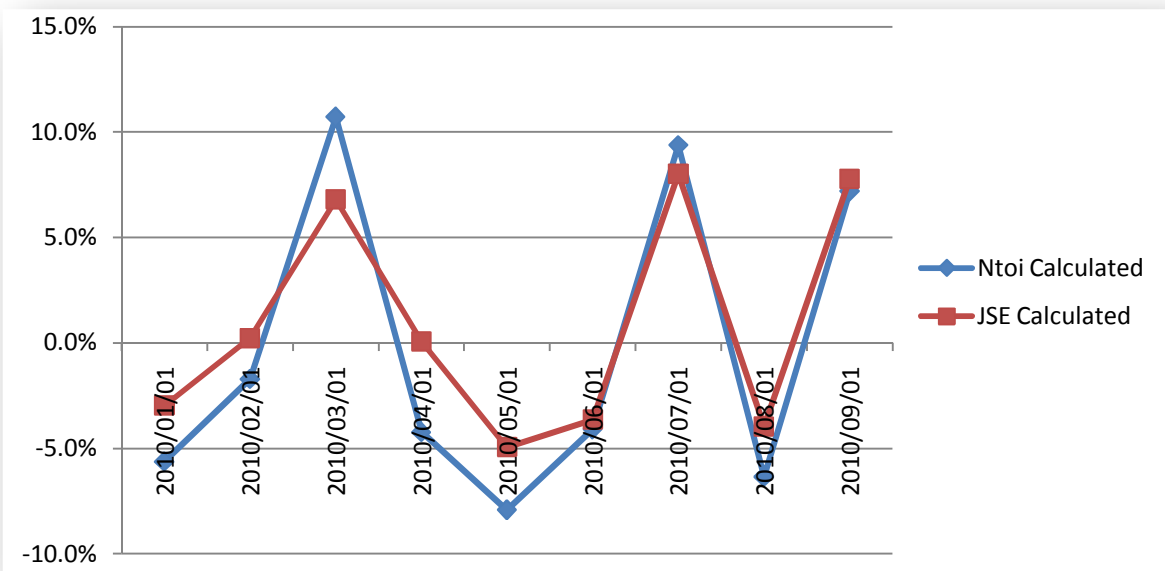
Linear regression and correlation statistical tests were carried out using NCSS 2007 to quantify the correlation between the SRI SWIX calculated in this study relative to the FTSE/JSE SRI SWIX. The correlation coefficient was found to be 0.9686 and the associated R-squared value was found to be 0.9381. This confirms that there is indeed a close correlation between the two SRI SWIX indices.

The results of the SRI SWIX AMR relative to that of the ALSI SWIX, are displayed in Figure 7.

Figure 7: SRI SWIX vs ALSI SWIX Market Performance (2004 . 2010)
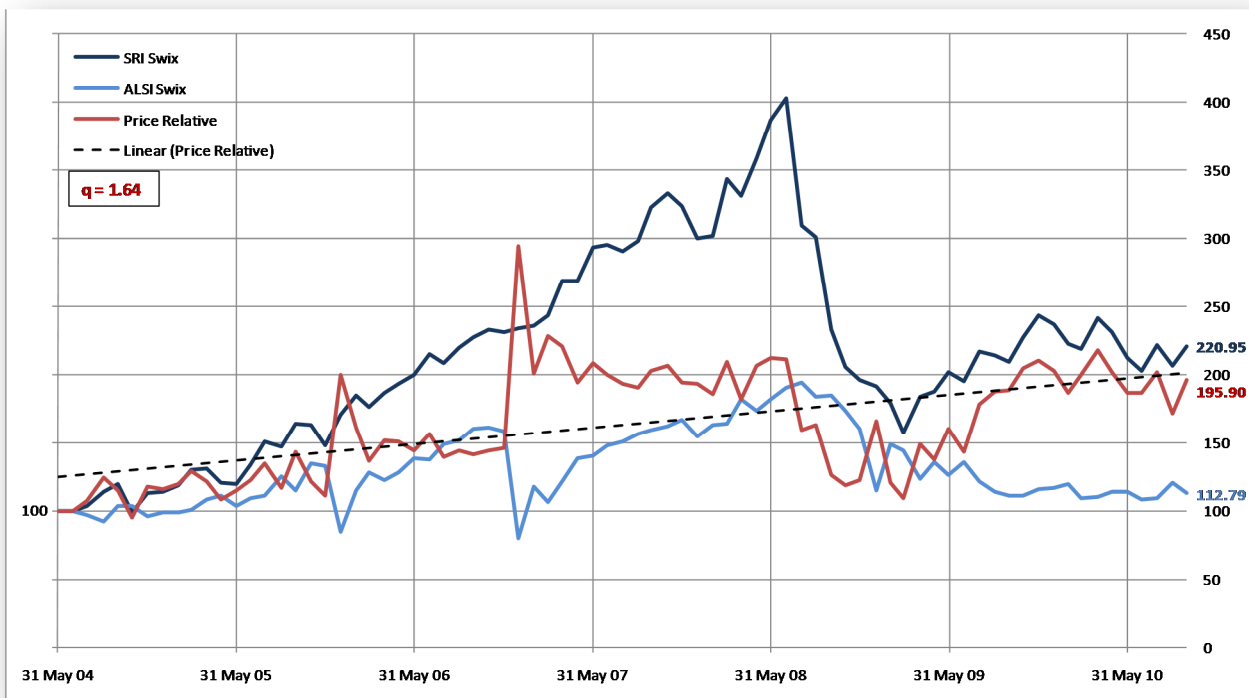
It can be observed on the chart that the SRI SWIX and ALSI SWIX market performances are not as closely matched as the SRI and ALSI market performances. A qualitative assessment determines that the SRI SWIX

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outperforms the ALSI SWIX. This is evident in the slope of the price relative curve, which displays an upward trend. The q-value is greater than one, which confirms that the SRI SWIX outperforms the ALSI SWIX.

The statistical analysis results are presented in Table 8 and Table 9.

Table 8: Descriptive Statistics for SRI SWIX vs ALSI SWIX AMRs

Variable	Count	Mean	Std. Deviation
SRI SWIX AMR	75	0.0106	0.0828
ALSI SWIX AMR	75	0.0016	0.1366

Table 9: Aspin-Welch Unequal Variance T-Test for SRI SWIX vs ALSI SWIX AMRs

Alternative Hypothesis	T-Value	Probability Level	Reject H0 at .050	Power (Alpha=.050)
Difference <> 0	0.4862	0.627519	No	0.077136
Difference < 0	0.4862	0.686241	No	0.016632
Difference > 0	0.4862	0.313759	No	0.122854
Difference: (SRI SWIX_Returns)-(ALSI SWIX_Returns)				

The mean AMR of the SRI was 0.0106 and the mean AMR of the ALSI was 0.0016. This confirms the qualitative observation that the SRI appears to outperform the ALSI. However, as to whether this difference is statistically significant at a significance level of 5%, the t-test results show that there is not a significant difference. Therefore, the null hypothesis cannot be rejected and the null hypothesis stands. The conclusion is drawn that there is not a significant difference between the AMR of the SRI and the AMR of the ALSI, even when the SWIX is used to adjust for the perceived imbalances in the ALSI.

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However, it was deemed necessary to carry out yet another adjustment. The SRI forms a considerable proportion of the ALSI, comprising approximately 43% of the index's constituents. Therefore, a comparison of the SRI and ALSI is, to a large extent, a comparison of the very same test units. For this reason, the decision was made to construct a new index, excluding the SRI constituents from the ALSI. The following section presents the results of the analysis of the relative AMRs of the SRI and the ALSI-less-SRI indices.

5.2.3 SRI SWIX vs ALSI-less-SRI SWIX

The relative market performances of the SRI SWIX and ALSI-less-SRI SWIX indices is displayed in Figure 8: **SRI SWIX vs ALSI-less-SRI SWIX Market Performance**

It can be observed on the chart that the difference between SRI SWIX and ALSI-less-SRI SWIX market performances are even more pronounced than the SRI SWIX vs ALSI SWIX analysis. Moreover, the ALSI-less-SRI SWIX cumulative returns appear to be deteriorating over time, ending at 37.57 from the starting point of 100, which indicates that shareholders are losing value. A qualitative assessment determines that the SRI SWIX considerably outperforms the ALSI-less-SRI SWIX. This is evident in the slope of the price relative curve and the high q-value, which is more than four times greater than one.

Figure 8: SRI SWIX vs ALSI-less-SRI SWIX Market Performance (2004 . 2010)
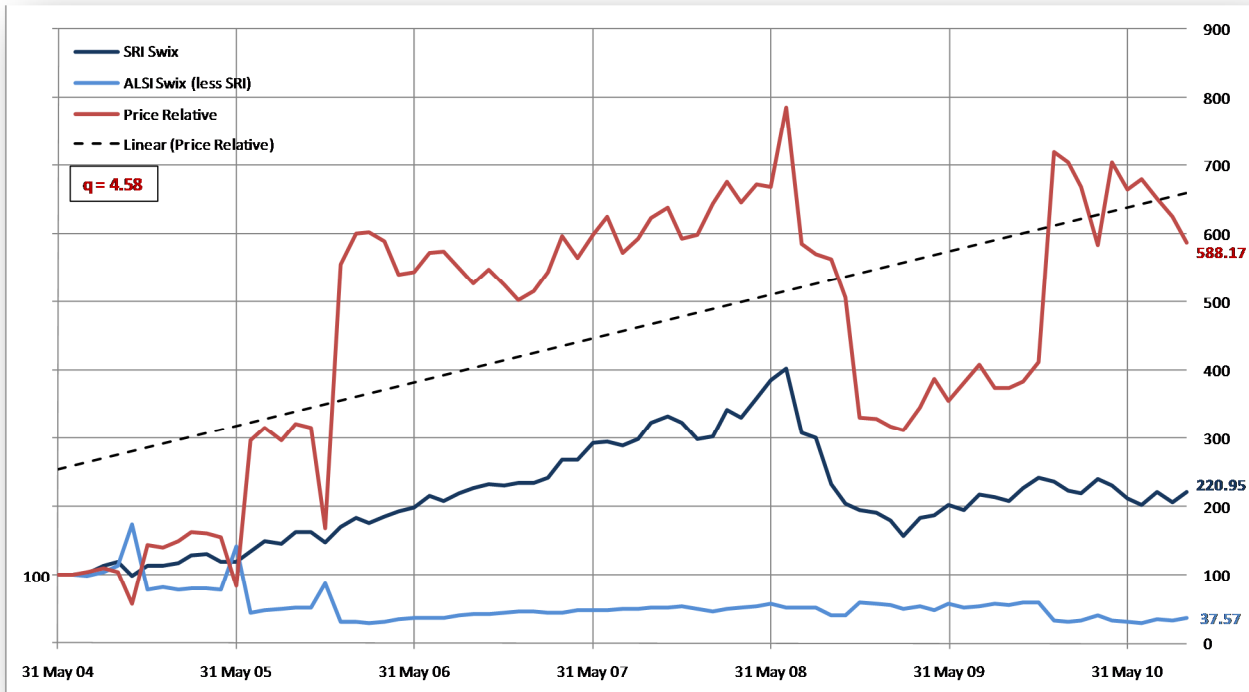
The statistical analysis results are presented in Table 10 and Table 11.

Table 10: Descriptive Statistics for SRI SWIX vs ALSI-less-SRI SWIX AMRs

Variable	Count	Mean	Std. Deviation
SRI SWIX AMR	75	0.0106	0.0828
ALSI-less-SRI SWIX AMR	75	-0.0131	0.2548

Table 11: Aspin-Welch Unequal Variance T-Test for SRI SWIX vs ALSI-less-SRI SWIX AMRS

Alternative Hypothesis	T-Value	Probability Level	Reject H0 at .050	Power (Alpha=.050)
Difference <> 0	0.7637	0.446248	No	0.118116
Difference < 0	0.7637	0.776876	No	0.008084
Difference > 0	0.7637	0.223124	No	0.188181
Difference: (SRI_Returns)-(ALSI [less SRI]_Returns)				

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The mean AMR of the SRI was 0.0106, as before, and the mean AMR of the ALSI (less SRI) was -0.0131, which confirms the qualitative observations that the SRI appears to outperform the ALSI-less-SRI and that the ALSI-less-SRI has in fact experienced an overall negative growth during the study period. However, based on the equal variance t-test, there is not a significant difference between the AMR of the SRI and that of the ALSI-less-SRI at the 5% significance level; therefore, the null hypothesis stands and the conclusion is drawn that there is not a significant difference between the AMRs of the SRI and the ALSI, even when the ALSI is adjusted to reflect only that shareholding which does not subscribe to the SRI.

5.3 Hypothesis 2

The null hypothesis stated that there is not a significant difference between the PBRs of SRI and non-SRI companies listed on the JSE Main Board. The alternative hypothesis stated that the PBR of SRI companies is significantly more or less than that of the non-SRI companies.

Table 12 shows that the average PBR of sustainable South African listed companies, between 2005 and 2010, is 5.6. It peaks in 2007 and is at its lowest in 2010. There is a noticeable decline in 2008 and the PBR subsequently has not recovered to its previous levels. Prior to the global recession, the PBR values were higher than the 6-year average of 5.6, but thenceforth, the trend has been steadily

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declining. On average, the PBRs of SRI companies deviate from 5.6 by 22.99.
This suggests that there are large variations of PBRs among these companies.

Table 12: Descriptive Statistics for SRI CompaniesqPBRs (2005 . 2010)

| Category	Year	Count	Mean	Std. Deviation
SRI Companies	2005	61	6.018	22.7612
	2006	63	7.295	28.6978
	2007	65	8.900	36.5946
	2008	65	3.521	8.0318
	2009	64	2.874	3.1922
	2010	13	2.852	1.9309
	TOTAL	**331**	**5.604**	**22.9902**

Table 13 summarises the descriptive statistics analysis results for the non-SRI listed
companies for the period, 2005 . 2010. The average PBR is 3.01 with the highest
level reached in 2006. Average deviation from the mean is 12.84. In comparison,
non-SRI companies have lower PBRs on average, and with less variation.
Nevertheless, the trend looks similar. Before 2008, the PBR averages for each year
were higher than the overall average, but since the global recession, the trajectory
has been downward. This result is displayed graphically in Figure 9.

Table 13: Descriptive Statistics for non-SRI Companies' PBRs (2005 . 2010)

Category	Year	Count	Mean	Std. Deviation
Non-SRI Companies	2005	169	2.518	3.4724
	2006	171	4.762	25.5741
	2007	193	4.118	12.1658
	2008	217	2.460	8.6096
	2009	222	1.966	6.8853
	2010	57	1.662	1.6548
	TOTAL	**1029**	**3.012**	**12.8401**

Figure 9: SRI Mean PBR vs Non-SRI Mean PBR (2005 . 2010)
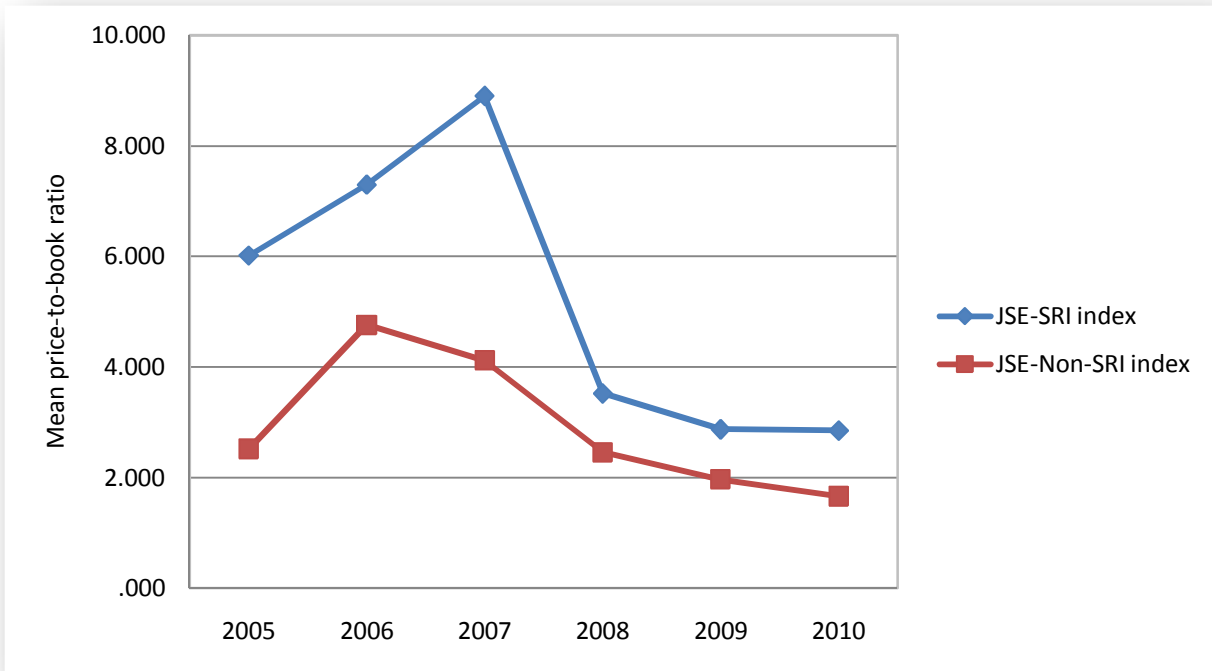
Based on the descriptive statistics and the graphical presentation, it can be observed that the mean PBR of sustainable South African listed companies is generally higher than that of the non-sustainable companies. This is observable in all the years covered in this study.

This finding is further supported by the results of the F-test using Analysis of Variance (ANOVA). The logic for using the test is to be able to determine whether there is a significant difference between sustainable and non-sustainable companies in terms of PBR, at the same time capturing the effect of year (that serves as a blocking factor). The ANOVA F-test results are presented in Table 14.

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Table 14: Test of Between-Subject Effects . Price/Book Value Ratio (2005 . 2010)

Source	Type III Sum of Squares	Degrees of Freedom	Mean Square	F	Sig.
Corrected Model	4104.984[a]	6	684.164	2.711	0.013
Intercept	14125.395	1	14125.395	55.967	0.000
Index	1522.997	1	1522.997	6.034	0.014
Year	2422.367	5	484.473	1.920	0.088
Error	341483.158	1353	252.390		
Total	363640.227	1360			
Corrected Total	345588.142	1359			
Dependent Variable: Price/Book Value Ratio					
a. R Squared = 0.012 (Adjusted R Squared = 0.007)					

Using a 5% level of significance, results of the test show that the mean PBR of sustainable South African listed companies is significantly different from that of the non-sustainable companies (p-value = 0.014). That is to say that the sustainable companies significantly outperform the non-sustainable companies, in terms of PBR.

Therefore, the null hypothesis can be rejected and the conclusion is drawn that the PBR of SRI listed companies is significantly greater than the PBR of non-SRI listed companies on the JSE Main Board.

5.4 Hypothesis 3

The null hypothesis stated that there is not a significant difference between the PERs of SRI and non-SRI companies listed on the JSE Main Board.   The

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alternative hypothesis stated that the PER of SRI companies is significantly greater than or less than that of the non-SRI companies.

Table 15 shows the average PERs of sustainable South African listed companies between 2005 and 2010.

Table 15: Descriptive Statistics for SRI CompaniesqPERs (2005 . 2010)

Category	Year	Count	Mean	Std. Deviation
SRI Companies	2005	61	13.21	29.790
	2006	63	8.34	24.567
	2007	65	19.56	33.644
	2008	65	10.10	10.305
	2009	64	13.64	82.739
	2010	13	18.32	10.348
	TOTAL	**331**	**13.20**	**42.908**

In terms of PER, the 6-year average of these companies is computed to be 13.20 with a standard deviation of 42.91. This suggests that there is also a huge variation of PERs for these companies. The highest average PER is observed in 2007 and the lowest in 2006. Unlike the PBRs, the PERs appear to recover subsequent to a slump in 2008.

Table 16 shows the average PERs of non-sustainable South African listed companies between 2005 and 2010. In the 6 years recorded, the average PER of non-sustainable South African listed companies is 6.90, with a standard deviation of 60.38. The highest average PER is observed in 2007 with the lowest occurring in 2009.

Table 16: Descriptive Statistics for non-SRI Companies' PERs (2005 . 2010)

Category	Year	Count	Mean	Std. Deviation
Non-SRI Companies	2005	168	10.90	89.821
	2006	168	8.92	39.727
	2007	192	12.56	63.712
	2008	216	3.96	47.830
	2009	221	0.31	58.204
	2010	56	7.86	36.652
	TOTAL	**1021**	**6.90**	**60.380**

Compared to SRI companies, the average PER of this group is lower, but it follows a similar trend. The effect of the global recession is again evident, with the average PER declining in 2008 and further in 2009. Nevertheless, it appears to recover rapidly in 2010. This result is displayed graphically in Figure 10.

Figure 10: SRI Mean PER vs Non-SRI Mean PBR (2005 . 2010)
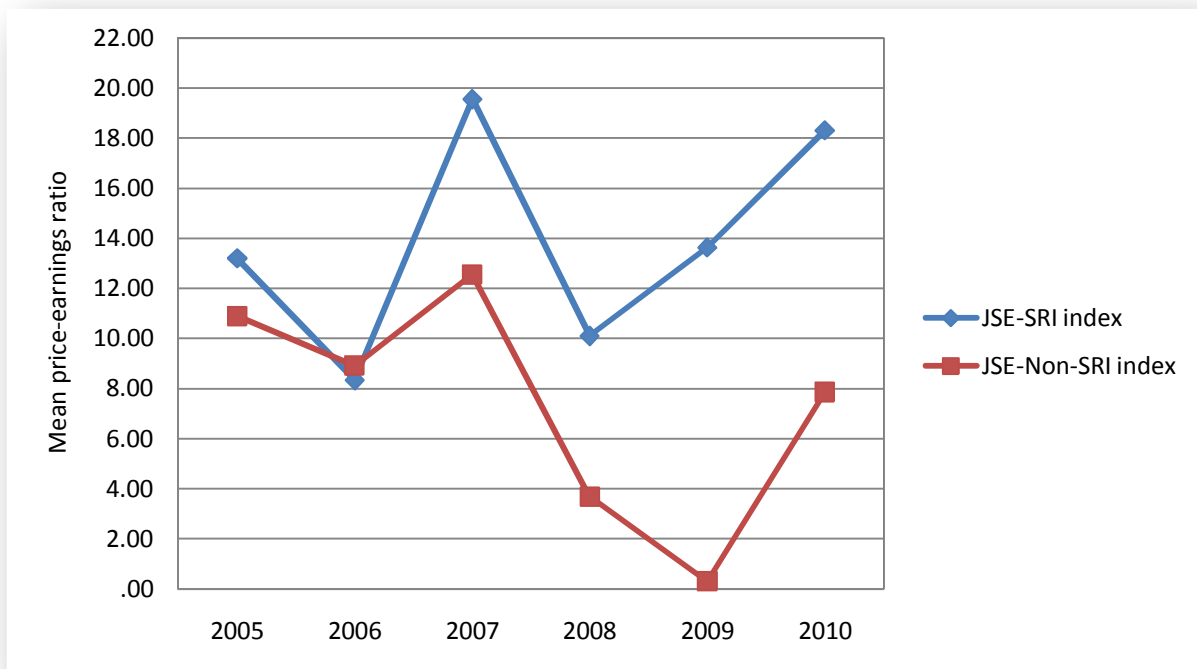
The ANOVA F-test results are presented in Table 17.

Table 17: Test of Between-Subject Effects . Price/Earnings Ratio (2005 . 2010)

Source	Type III Sum of Squares	Degrees of Freedom	Mean Square	F	Sig.
Corrected Model	30891.631[a]	6	5148.605	1.608	0.141
Intercept	88488.009	1	88488.009	27.645	0.000
Index	9134.104	1	9134.104	2.854	0.091
Year	20966.756	5	4193.351	1.310	0.257
Error	4305209.958	1345	3200.900		
Total	4432464.284	1352			
Corrected Total	4336101.589	1351			
Dependent Variable: Price/Earnings Ratio					
b. R Squared = 0.007 (Adjusted R Squared = 0.003)					

From Table 17 its can be observed that the F-test suggests that the mean PER for sustainable South African listed companies is not significantly different from that of the non-sustainable companies at 5% level of significance (p-value = 0.091).

It can be observed from Figure 10 that it was only in 2006 that the mean PER of the SRI companies is slightly lower than that of the non-SRI companies. When the F-test is relaxed and a 10% level of significance is used, the result supports the expectation that the mean PER of SRI companies is significantly greater than that of non-SRI companies. However, for the purpose of this study, it has to be concluded that the null hypothesis cannot be rejected at the 5% significance level and that there is not a significant difference between the PERs of SRI and non-SRI companies listed on the JSE.

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6. DISCUSSION OF RESULTS

6.1 Overview

In this chapter the research findings are interpreted and their implications discussed. The findings are also compared and contrasted with the findings of previous studies conducted in different markets, with possible explanations postulated for the similarities and differences encountered. The chapter follows a structure similar to Chapter 5, with the discussions arranged in accordance with the various research hypotheses.

6.2 Hypothesis 1

The findings for this hypothesis were that there were differences between the average market return (AMR) of the FTSE/JSE Socially Responsible Investment Index (SRI) and that of the FTSE/JSE All Share Index (ALSI); however, they were not statistically significant and the null hypothesis could not be rejected.

These findings are consistent with those of Bauer *et al.* (2002) and McWilliams and Siegel (2000), who found an inconclusive relationship between CSR and CFP.

Bauer *et al.* used a Carhart multi-factor model to correct for the perceived sector and style biases of prior studies. Their study showed no significant difference in risk-adjusted returns between ethical and conventional funds for the period 1990 . 2001.

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In the McWilliams and Siegel (M&S) study, they attributed the inconsistency in preceding studies' findings regarding the CSR/CFP relationship, to misspecifications in those studies. The studies failed to control for industry-level factors, which have been shown to explain variations in firm performance across industries. Specifically, M&S identified a firm's rate of investment in R&D and the advertising intensity within the firm's industry, as factors that should be considered in the study of the CSR/CFP relationship. Having made these corrections, M&S then found that the relationship between a firm's CSR and CFP is neutral. That is to say, they found neither a positive nor a negative relationship.

Van de Velde *et al.* (2005), on the other hand, found that on a style-adjusted basis, high sustainability-rated portfolios performed better than low-rated portfolios. Their adjustments were related to the rating of a firm's CSR performance. They stated that it was not enough to compare the raw performances of sustainability-screened portfolios with traditional portfolios in that performance differences could be attributed to a wide range of firm-level factors beyond sustainability. They made corrections by using the "Fama and French" model and rated companies' CSR performance on five dimensions, which can distinguish between varying levels of corporate sustainability.

In the current study, three separate tests were conducted for the period May 2004 to September 2010, with some adjustments to the samples and data carried out for the second and third tests. The first test simply compared the closing index values for the SRI and ALSI indices. The second test compared the changes in total market capitalisation for the SRI and ALSI indices, using FTSE/JSE Shareholder Weighted

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Index (SWIX) weighting values. The third test compared the changes in total market capitalisation for the SRI and the ALSI (less SRI) self-constructed index, also using SWIX weighting values.

The differences between the SRI and ALSI AMRs became more pronounced with every test, with the first test determining that the SRI slightly underperforms (q=0.98) relative to the ALSI, the second test determining that the SRI slightly outperforms the ALSI (q=1.64), and the third test determining that the SRI greatly outperforms the ALSI-less-SRI (q=4.58).

The possible explanations for all the tests failing to reject the null hypothesis can be summarised as follows:

1. As highlighted in the research limitations, the global financial crisis struck in late 2007, which falls right in the middle of the study period. The effects of the recession are still prevalent in the stock market with the ALSI not having yet reached the levels it had achieved prior to the recession. Consequently, the results of the relationship between CSR and CFP may be distorted. Figure 5 shows that in the latter period of the study, post the recession, the gap between the SRI and ALSI AMRs widens, with the SRI apparently taking longer to recover. It is also worth noting that the SRI's AMR was apparently higher at the peak than that of the ALSI, and lower at the nadir of the indices' performances, which confirms that the SRI was worse affected by the recession.

2. ALSI consists of the top 99% of the JSE in terms of market capitalisation. This means that the ALSI and SRI constituents are more mature and regarded as value companies as opposed to the smaller cap companies, which are regarded as growth companies. It follows then that these organisations are more liquid and would therefore be worse affected by the recession, in that investors would invariably pull out of these stocks first when times are hard. Focussing the study on these large organisations would have served to exaggerate the effects of the recession on South African companies.

3. The horizon for the research was only six and a half years. According to Hill *et al.* (2006), the correlation between CSR and CFP is observable in the long term. Hill *et al.* found that most ethical portfolios outperformed their conventional counterparts over a period spanning at least 10 years.

The specific reasons why the individual hypothesis tests could not yield significant differences between the SRI and non-SRI indices, are discussed below.

6.2.1 SRI vs ALSI

1. The SRI listed companies constitute a large proportion of the ALSI, ranging from 31% in May 2004 to 43% in September 2009. For this reason, the SRI and ALSI performances are not independent and this is evident in the charts, which closely track each othersqperformances, as observed in Figure 5.

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2. The SRI and ALSI indices were taken at face value without any adjustment. This meant that both indices were heavily weighted in favour of the Basic Resources sector. It also meant that there was a lot of foreign shareholding within the indices. Although it is accepted that the South African economy was not as critically debilitated by the recession as the developed economies of the US and UK, the heavy weighting of the Basic Resources sector and the high prevalence of foreign shareholding, would have transferred the global effects through to these indices. Firstly, foreign investors with stakes in South African companies pulled out of these liquid stocks in high volumes, which had the effect of lowering share prices and thereby the index closing values. Secondly, commodity prices were specifically pressurised by slower GDP growth and decelerating global export trade. This then had the effect of depressing the ALSI, and thereby SRI, AMR values.

6.2.2 SRI SWIX vs ALSI SWIX

1. Although the SWIX indices effectively corrected for the imbalance in the weighting of sectors and shareholding in the indices, the SRI listed companies still constituted a large proportion of the ALSI. Accordingly, the test was still largely comparing the performance of the same test units. Larger differences in performance were evident when the SWIX indices were used and the SRI was seen to outperform the ALSI ($q = 1.64$); however, these differences were not statistically significant.

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2. The difference between the AMRs of the SWIX SRI and the ALSI SRI is seen to be increasing prior to the recession (see Figure 7). However, the recession appears to have had a greater impact on the SRI SWIX than the ALSI SWIX, with the effect that the gap between the two indices narrowed considerably during the slump. Subsequent to the recessionary slump experienced by the SRI SWIX, the gap is seen to start widening again. It can therefore be argued that had it not been for the recession, this gap would have continued to widen and possibly yielded differences of statistical significance between the SRI SWIX and the ALSI SWIX.

6.2.3 SRI SWIX vs ALSI-less-SRI SWIX

1. Despite the considerable difference between the AMRs of the SRI SWIX and ALSI-less-SRI SWIX (as evident from the large q-value of 4.58), the data has very high variance. This can be seen in the large standard deviations relative to the means:

- SRI mean = 0.0106; SRI standard deviation = 0.0828

- ALSI-less-SRI mean = -0.0131; ALSI-less-SRI standard deviation = 0.2548

   This means that the data has a large spread, and while the mean values may themselves be far apart, this is not true for all the data points throughout the study period. The fact that the standard deviation is absolutely larger than the mean for both variables, indicates that both indices are highly volatile. The

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result of this is that there are not large enough differences between the variables when the entire pool of data is considered. This is displayed graphically in Figure 11.

Figure 11: SRI vs ALSI-less-SRI Box Plot
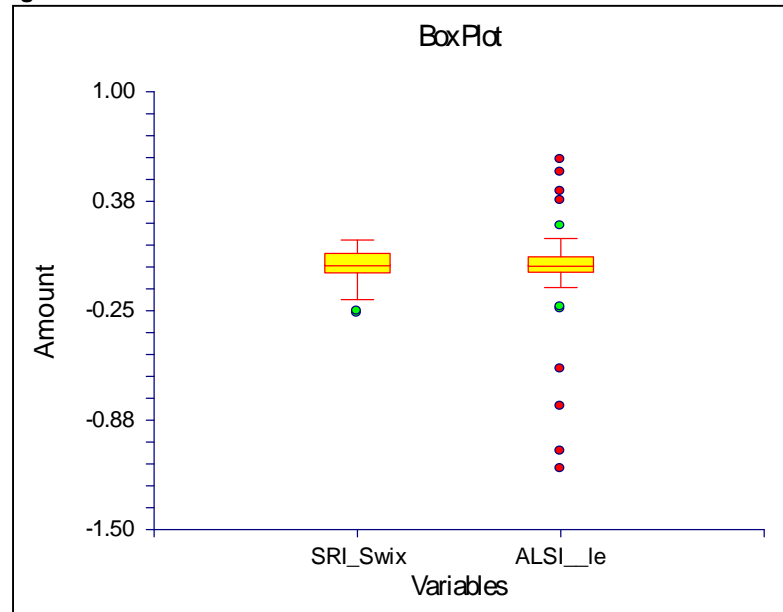
The box plot shows that there is a large zone in which the SRI and ALSI-less-SRI data overlap. This is represented by the box area of the plot, which encapsulates 50% of the data within each sample.

2. There is a high prevalence of outliers in the data. This can also be seen in Figure 11 and clearly there are more outliers in the ALSI-less-SRI sample. This would have had the effect of shifting the mean (albeit moreso the median) with the result that the statistical mean values tested for statistical difference, are skewed. No corrections were made for these outliers in the interests of retaining a large enough sample for testing.

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6.3 Hypothesis 2

The findings for this hypothesis were that there were differences between the average price/book value ratio (PBR) of the companies listed on the FTSE/JSE Socially Responsible Investment Index (SRI) and that of the JSE Main Board companies that are not listed on the SRI, are statistically significant and the null hypothesis was rejected in favour of the alterative hypothesis. Accordingly, it was concluded that the average PBR of SRI listed companies is significantly greater than that of non-SRI listed companies on the JSE.

This finding corroborates those of Berns *et al.* (2009) and Van de Velde *et al.* (2005). Berns *et al.* found that CSR can lead to a stronger brand and Van de Velde *et al.* found that investors are generally willing to pay a premium for companies with good stakeholder relations. As stated in *4.1 Overview*, the discrepancy between a company's equity's book value and market value, can largely be attributed to goodwill and brand name. This may account for the higher PBR values observed for SRI listed companies in this study.

With that said, there are some shortcomings to the PBR that are worth articulating. The PBR can reveal one of two things about a company . either investors are willing to pay a premium for the stock over the company's book value, or the company has been earning a very poor return on its assets. However, in the case of the latter, the effect would be short-lived in that the shareholders would eventually divest to cut their losses, which would result in the high PBR for the company correcting itself.

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Additionally, the PBR is most appropriate for capital-intensive businesses or finance institutions whose major assets are tangible and reflected on the books. It does not carry as much meaning for service-based firms whose assets are mostly intangible. However, it has been pointed out that the ALSI and SRI are dominated by companies in the Basic Resources sector, which are capital-intensive; therefore, the PBR was, for the most part, a suitable ratio to use.

However, this ratio would have been more reliable if the SRI sample was large enough to allow for statistical comparison of companies within the same industry.

6.4 Hypothesis 3

The findings for this hypothesis were that there were differences between the average price/earnings ratio (PER) of the companies listed on the FTSE/JSE Socially Responsible Investment Index (SRI) and that of the JSE Main Board companies that are not listed on the SRI. However, these differences are not statistically significant and the null hypothesis could not be rejected. It was concluded that the average PER of SRI listed companies is not significantly different to that of non-SRI listed companies on the JSE.

Although this outcome seems almost contrary to that of Hypothesis 2, where it was concluded that investors appear to pay a premium for sustainable companies, a clear difference in the mean PER of SRI listed companies and that of non-SRI listed companies, can be observed in Figure 10, where the SRI mean PER is higher for

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the most part. It is also worth noting that at the 10% significance level, the SRI mean PER was found to be significantly greater than the non-SRI mean PER. Again, the effect of the global recession on the financial results cannot be ignored.

Little and Little (2000: 137) found that companies with stronger reputations for CSR have marginally better PERs. Bird *et al.* on the other hand found mixed results but concluded that CSR, among other factors contributing to a company's brand and reputation, can have an influence on the PER. This is consistent with the findings of the current study in that there are definite differences to be observed, though it could be argued that CSR is not the sole contributing factor. Indeed, causality was not investigated in this study and the impact of CSR on the PERs of companies was not tested in the absence of other firm-level factors.

Nevertheless, it is worth mentioning that there are some shortcomings related to the PER as a measure of a company's stock market value. Firstly, PERs are not a true indication of how a company will grow in future. It is a snapshot reflection of investor sentiment at a point in time. However, since this study was concerned precisely with the behaviour of investors it sufficed as a measure of the confidence the stock market places on an organisation.

Secondly, earnings tend to fluctuate for companies in cyclical industries, which can result in volatile PERs that meander between extremely low and extremely high values. However, in the current study, there was a good balance of industry representivity between the SRI listed and non-SRI listed companies; therefore, this

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would have had an equal impact on both samples, thereby effectively ruling out the error.

Thirdly, a PER is a simplified way of valuing companies and does not reflect the complexity of every company's unique features and business mix. However, this study was only interested in identifying the trends among both SRI listed and non-SRI listed organisations, and these biases would have applied to both samples. In this way, the outcomes of this study are still revealing about the stock market value of sustainable companies compared with that of companies that are not.

This ratio also would have been more reliable if the SRI sample was large enough to allow for statistical comparison of companies within the same industry.

7. CONCLUSION

7.1 Concluding Remarks

This is the first study undertaken in South Africa that specifically investigates the relative performances of the FTSE/JSE Socially Responsible Investing Index (SRI), the FTSE/JSE All Share Index (ALSI) and the companies listed on the JSE Main Board that are not SRI constituents. Although two out of the three hypotheses failed to yield significant statistical outcomes, all the findings were in favour of the SRI.

The question, "Do investors in emerging markets unreservedly embrace corporate sustainability and incorporate it in their investment decisions?", can now be answered with some degree of analytical heft.

The results of the data analysis reflect that corporate sustainability is, to a certain extent, rewarded by the stock market. This is seen in the higher average market returns (AMR), higher average price/book value ratios (PBR) and higher average price/earnings ratios (PER) observed for SRI listed organisations in all the tests (save for the indices not adjusted for sectoral and foreign shareholding biases). It is suggested that data extracted over a longer time horizon and sans the effects of the global financial crisis would have yielded more definitive results.

Indications are, however, that investors are more inclined to place faith in the future performance of sustainable companies during the highs of the economic cycle. In tough times the SRI listed organisations are seen to perform more adversely than

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those that are not listed on the SRI, even though they appear to also recover more rapidly. That is to say, SRI stocks are more volatile than non-SRI stocks but also more resilient.

7.2 Recommendations

This research has opened up the avenue for future studies to investigate the purported links between sustainability and financial performance in the context of emerging markets. To ensure that the follow up investigations are more rigorous, the following recommendations are made:

- Studies should be conducted over a longer time horizon (at least 10 years) and under normal economic conditions (i.e. without the effect of the global financial crisis) to obtain more reliable data related to the financial performance of sustainable and non-sustainable organisations.

- Event study methodologies that examine specific CSR episodes in the public domain and any resulting abnormal returns, should be employed. This would go a long way in establishing direct links between corporate sustainability and financial performance.

- Future studies should endeavour to establish whether any causality exists between corporate sustainability and the financial performance of firms.

- Reliable metrics should be used to measure the sustainability of organisations, which distinguish between varying degrees of CSR performance. This would allow for the development of regression models that more accurately reflect the correlation between corporate sustainability and financial performance.

- The impact of corporate sustainability on financial performance, using accounting-based measurements, should be investigated. This would investigate another dimension of the purported CSR/CFP linkages and take account of firm-level factors, which invariably play a role in the financial performance of organisations.

- Larger samples should be used to test the impacts of corporate sustainability on the PBR and PER. This would enable these tests to be conducted within industries while meeting the sample requirements of statistical analysis.

- Studies should be conducted on the performance of the SRI in other emerging markets. This would complete the picture painted here and provide impetus for a verdict to be submitted on the uptake of corporate sustainability in emerging markets.

"What you give you get, ten times over."

Yoruba proverb

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9. APPENDICES

Appendix 1: Companies listed on JSE Main Board, ALSI and SRI

JSE Main Board

1. A E C I LIMITED
2. ABSA BANK LIMITED
3. ABSA CAPITAL
4. ABSA GROUP LIMITED
5. ACUCAP PROPERTIES LIMITED
6. ADAPTIT HOLDINGS LIMITED
7. ADCOCK INGRAM HOLDINGS LIMITED
8. ADCORP HOLDINGS LIMITED
9. ADVTECH LIMITED
10. AFGRI LIMITED
11. AFRICAN AND OVERSEAS ENTERPRISES LD
12. AFRICAN BANK INVESTMENTS LIMITED
13. AFRICAN MEDIA ENTERTAINMENT LIMITED
14. AFRICAN OXYGEN LIMITED
15. AFRICAN RAINBOW MINERALS LIMITED
16. AFRIMAT LIMITED
17. AFROCENTRIC INVESTMENT CORP LIMITED
18. AG INDUSTRIES LIMITED
19. ALEXANDER FORBES PREF SHARE INV LTD
20. ALLIED ELECTRONICS CORPORATION LTD
21. ALLIED TECHNOLOGIES LIMITED
22. AMALGAMATED APPLIANCE HOLDINGS LD
23. AMALGAMATED ELECTRONICS CORP LTD
24. ANDULELA INVESTMENT HOLDINGS LTD
25. ANGLO AMERICAN PLC
26. ANGLO PLATINUM LIMITED
27. ANGLOGOLD ASHANTI LIMITED
28. ANGLORAND HOLDINGS LIMITED
29. ANOORAQ RESOURCES CORPORATION
30. AQUARIUS PLATINUM LIMITED
31. ARB HOLDINGS LIMITED
32. ARCELORMITTAL SOUTH AFRICA LIMITED
33. ARGENT INDUSTRIAL LIMITED
34. ASPEN PHARMACARE HOLDINGS LIMITED
35. ASSORE LIMITED
36. ASTRAL FOODS LIMITED
37. ASTRAPAK LIMITED
38. AUSTRO GROUP LIMITED
39. AVENG LIMITED

40. AVI LIMITED
41. AVUSA LTD
42. AWETHU BREWERIES LIMITED
43. BARLOWORLD LIMITED
44. BARNARD JACOBS MELLET HOLDINGS LD
45. BASIL READ HOLDINGS LIMITED
46. BAUBA PLATINUM LIMITED
47. BELL EQUIPMENT LIMITED
48. BETTABETA CIS
49. BHP BILLITON PLC
50. BICC CAFCA LIMITED
51. BIPS INVESTMENT MANAGERS PTY LTD
52. BLUE LABEL TELECOMS LIMITED
53. BONATLA PROPERTY HOLDINGS LIMITED
54. BOWLER METCALF LIMITED
55. BRAIT S.A. SOCIETE ANONYME
56. BRC DIAMONDCORE LIMITED
57. BRIAN PORTER HOLDINGS LIMITED
58. BRIMSTONE INVESTMENT CORPORATION LD
59. BRITISH AMERICAN TOBACCO PLC
60. BUILDMAX LIMITED
61. BUSINESS CONNEXION GROUP LIMITED
62. CADIZ HOLDINGS LIMITED
63. CAPE EMPOWERMENT LIMITED
64. CAPEVIN INVESTMENTS LIMITED
65. CAPITAL & COUNTIES PROPERTIES PLC
66. CAPITAL PROPERTY FUND
67. CAPITAL SHOPPING CENTRES GROUP PLC
68. CAPITEC BANK HOLDINGS LIMITED
69. CARGO CARRIERS LIMITED
70. CASHBUILD LIMITED
71. CAXTON CTP PUBLISHERS & PRINTERS LD
72. CENTRAL RAND GOLD LIMITED
73. CERAMIC INDUSTRIES LIMITED
74. CIC HOLDINGS LIMITED
75. CIPLA MEDPRO SOUTH AFRICA LIMITED
76. CITY LODGE HOTELS LIMITED
77. CITY OF JHB METROP MUNICIPALITY
78. CLICKS GROUP LIMITED
79. CLIENTELE LIMITED
80. COAL OF AFRICA LIMITED
81. COLLIERS SOUTH AFRICA HOLDINGS LTD
82. COMAIR LIMITED
83. COMBINED MOTOR HOLDINGS LIMITED

84. COMMAND HOLDINGS LIMITED
85. COMPAGNIE FINANCIERE RICHEMONT SA
86. COMPU-CLEARING OUTSOURCING LIMITED
87. CONDUIT CAPITAL LIMITED
88. CONSOLIDATED INFRASTRUCTURE GRP LTD
89. CONTROL INSTRUMENTS GROUP LIMITED
90. CONVERGENET HOLDINGS LIMITED
91. CORONATION FUND MANAGERS LIMITED
92. CORWIL INVESTMENTS LIMITED
93. COUNTRY BIRD HOLDINGS LIMITED
94. CROOKES BROTHERS LIMITED
95. CULLINAN HOLDINGS LIMITED
96. DATACENTRIX HOLDINGS LIMITED
97. DATATEC LIMITED
98. DECILLION LIMITED
99. DELTA EMD LIMITED
100. DEUTSCHE BANK AG
101. DIGICORE HOLDINGS LIMITED
102. DIMENSION DATA HOLDINGS PLC
103. DISCOVERY HOLDINGS LIMITED
104. DISTELL GROUP LIMITED
105. DISTRIB. AND WAREHOUSING NETWORK LD
106. DORBYL LIMITED
107. DRDGOLD LIMITED
108. EASTERN PLATINUM LIMITED
109. EFFICIENT FINANCIAL HOLDINGS LTD
110. ELB GROUP LIMITED
111. EMIRA PROPERTY FUND
112. EOH HOLDINGS LIMITED
113. EQSTRA HOLDINGS LIMITED
114. ESORFRANKI LIMITED
115. EVRAZ HIGHVELD STEEL & VANADIUM LTD
116. EXCELLERATE HOLDINGS LIMITED
117. EXXARO RESOURCES LIMITED
118. FAIRVEST PROPERTY HOLDINGS LIMITED
119. FAMOUS BRANDS LIMITED
120. FARITEC HOLDINGS LIMITED
121. FIRESTONE ENERGY LIMITED
122. FIRST URANIUM CORPORATION
123. FIRSTRAND LIMITED
124. FOORD COMPASS LIMITED
125. FORTRESS INCOME FUND LIMITED
126. FOUNTAINHEAD PROPERTY TRUST
127. FREEWORLD COATINGS LIMITED

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128. GIJIMA GROUP LIMITED
129. GLENRAND MIB LIMITED
130. GOLD FIELDS LIMITED
131. GOLD ONE INTERNATIONAL LIMITED
132. GOLD REEF RESORTS LIMITED
133. GRAND PARADE INVESTMENTS LIMITED
134. GREAT BASIN GOLD LIMITED
135. GRINDROD LIMITED
136. GROUP FIVE LIMITED
137. GROWTHPOINT PROPERTIES LIMITED
138. HARMONY GOLD MINING COMPANY LIMITED
139. HEALTH STRATEGIC INVESTMENTS LTD
140. HOSKEN CONSOLIDATED INVESTMENTS LTD
141. HOSPITALITY PROPERTY FUND LIMITED
142. HOWDEN AFRICA HOLDINGS LIMITED
143. HUDACO INDUSTRIES LIMITED
144. HULAMIN LIMITED
145. HWANGE COLLIERY COMPANY LIMITED
146. HYPROP INVESTMENTS LIMITED
147. IFA HOTELS AND RESORTS LIMITED
148. ILIAD AFRICA LIMITED
149. ILLOVO SUGAR LIMITED
150. IMPALA PLATINUM HOLDINGS LIMITED
151. IMPERIAL HOLDINGS LIMITED
152. INFRASORS HOLDINGS LIMITED
153. INGENUITY PROPERTY INVESTMENTS LTD
154. INTERTRADING LIMITED
155. INVESTEC BANK LIMITED
156. INVESTEC BANK LTD
157. INVESTEC LIMITED
158. INVESTEC PLC
159. INVICTA HOLDINGS LIMITED
160. ITALTILE LIMITED
161. ITRIX CIS
162. JASCO ELECTRONICS HOLDINGS LIMITED
163. JCI LIMITED
164. JD GROUP LIMITED
165. JSE LIMITED
166. JUBILEE PLATINUM PLC
167. KAGISO MEDIA LIMITED
168. KAIROS INDUSTRIAL HOLDINGS LIMITED
169. KAP INTERNATIONAL HOLDINGS LIMITED
170. KAYDAV GROUP LIMITED
171. KEATON ENERGY HOLDINGS LIMITED

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172. KELLY GROUP LIMITED
173. KUMBA IRON ORE LIMITED
174. LEWIS GROUP LIMITED
175. LIBERTY HOLDINGS LIMITED
176. LIFE HEALTHCARE GROUP HOLDINGS LTD
177. LITHA HEALTHCARE GROUP LIMITED
178. LONDON FINANCE AND INVEST. GRP PLC
179. LONMIN PLC
180. M CUBED HOLDINGS LIMITED
181. MARSHALL MONTEAGLE HLDGS SOC ANON
182. MASONITE (AFRICA) LIMITED
183. MASSMART HOLDINGS LIMITED
184. MAZOR GROUP LIMITED
185. MEDI-CLINIC CORPORATION LIMITED
186. MERAFE RESOURCES LIMITED
187. MERCANTILE BANK HOLDINGS LIMITED
188. MERCHANT & INDUSTRIAL PROP LIMITED
189. METAIR INVESTMENTS LIMITED
190. METMAR LIMITED
191. METOREX LIMITED
192. METROFILE HOLDINGS LIMITED
193. METROPOLITAN HOLDINGS LIMITED
194. MICROMEGA HOLDINGS LIMITED
195. MIRANDA MINERAL HOLDINGS LIMITED
196. MIX TELEMATICS LIMITED
197. MOBILE INDUSTRIES LIMITED
198. Mondi Limited
199. Mondi plc
200. MR PRICE GROUP LIMITED
201. MTN GROUP LIMITED
202. MURRAY & ROBERTS HOLDINGS LIMITED
203. MUSTEK LIMITED
204. MVELAPHANDA GROUP LIMITED
205. MVELAPHANDA RESOURCES LIMITED
206. NAMPAK LIMITED
207. NASPERS LIMITED
208. NEDBANK GROUP LIMITED
209. NEDBANK LIMITED
210. NEDBANK LTD
211. NET 1 UEPS TECHNOLOGIES INC
212. NETCARE LIMITED
213. NEW AFRICA INVESTMENT LIMITED
214. NEW CORPCAPITAL LIMITED
215. NEW EUROPE PROPERTY INVESTMENTS PLC

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216. NEW GOLD ISSUER LIMITED
217. NEWFUNDS COLLECTIVE INVEST SCHEME
218. NICTUS BEPERK
219. NORTHAM PLATINUM LIMITED
220. NU-WORLD HOLDINGS LIMITED
221. OANDO PLC
222. OCEANA GROUP LIMITED
223. OCTODEC INVESTMENTS LIMITED
224. OLD MUTUAL PLC
225. OMNIA HOLDINGS LIMITED
226. OPTIMUM COAL HOLDINGS LIMITED
227. ORION REAL ESTATE LIMITED
228. PALABORA MINING COMPANY LIMITED
229. PALLINGHURST RESOURCES LIMITED
230. Pamodzi Gold Limited
231. PAN AFRICAN RESOURCES PLC
232. PANGBOURNE PROPERTIES LIMITED
233. PARACON HOLDINGS LIMITED
234. PEREGRINE HOLDINGS LIMITED
235. PETMIN LIMITED
236. PHUMELELA GAMING & LEISURE LIMITED
237. PICK N PAY HOLDINGS LIMITED
238. PICK N PAY STORES LIMITED
239. PINNACLE TECHNOLOGY HOLDINGS LTD
240. PIONEER FOOD GROUP LIMITED
241. PLATMIN LIMITED
242. PREMIUM PROPERTIES LIMITED
243. PRETORIA PORTLAND CEMENT COMPANY LD
244. PRIMESERV GROUP LIMITED
245. PROP INDEX TRACKER COL INV SCHEME
246. PROTECH KHUTHELE HOLDINGS LIMITED
247. PSG FINANCIAL SERVICES LIMITED
248. PSG GROUP LIMITED
249. PURPLE CAPITAL LIMITED
250. PUTPROP LIMITED
251. RAINBOW CHICKEN LIMITED
252. RANDGOLD & EXPLORATION COMPANY LTD
253. RAUBEX GROUP LIMITED
254. REAL AFRICA HOLDINGS LIMITED
255. RECM AND CALIBRE LIMITED
256. REDEFINE PROP INTERNATIONAL LTD
257. REDEFINE PROPERTIES LIMITED
258. REINET INVESTMENTS S.C.A
259. REMGRO LIMITED

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260. RESILIENT PROPERTY INCOME FUND LTD
261. RESOURCE GENERATION LIMITED
262. REUNERT LIMITED
263. REX TRUEFORM CLOTHING COMPANY LTD
264. RMB HOLDINGS LIMITED
265. ROCKWELL DIAMONDS INCORPORATED
266. SA CORPORATE REAL ESTATE FUND
267. SAAMBOU HOLDINGS LIMITED
268. SABLE HOLDINGS LIMITED
269. SABMILLER PLC
270. SABVEST LIMITED
271. SACOIL HOLDINGS LIMITED
272. SALLIES LIMITED
273. SANLAM LIMITED
274. SANTAM LIMITED
275. SANYATI HOLDINGS LIMITED
276. SAPPI LIMITED
277. SASFIN HOLDINGS LIMITED
278. SASOL LIMITED
279. SATRIX COLLECTIVE INVESTMENT SCHEME
280. SATRIX COLLECTIVE INVESTMENT SCHEME
281. SEA KAY HOLDINGS LIMITED
282. SEARDEL INVESTMENT CORPORATION LTD
283. SECUREDATA HOLDINGS LIMITED
284. SEKUNJALO INVESTMENTS LIMITED
285. SENTULA MINING LIMITED
286. SEPHAKU HOLDINGS LIMITED
287. SHOPRITE HOLDINGS LIMITED
288. SIMMER AND JACK MINES LIMITED
289. SOUTH AFRICAN COAL MINING HLDGS LTD
290. SOUTH OCEAN HOLDINGS LIMITED
291. SOVEREIGN FOOD INVESTMENTS LIMITED
292. SPANJAARD LIMITED
293. SPESCOM LIMITED
294. SPUR CORPORATION LIMITED
295. SQUARE ONE SOLUTIONS GROUP LIMITED
296. STANDARD BANK GROUP LIMITED
297. STANDARD BANK OF SOUTH AFRICA LD
298. STANLIB COLLECTIVE INVESTMENTS LTD
299. STD BANK OF SA RETAIL DEPOSIT NOTES
300. STEFANUTTI STOCKS HOLDINGS LTD
301. STEINHOFF INTERNATIONAL HOLDINGS LD
302. STEINHOFF INVESTMENT HOLDINGS LD
303. STERLING WATERFORD CCN SPV 4

304. SUN INTERNATIONAL LIMITED
305. SUPER GROUP LIMITED
306. SYCOM PROPERTY FUND
307. TAWANA RESOURCES NL
308. TELKOM SA LIMITED
309. THABEX LIMITED
310. THE BIDVEST GROUP LIMITED
311. THE DB X-TRACKER COL INVEST SCHEME
312. THE DON GROUP LIMITED
313. THE FOSCHINI GROUP LIMITED
314. THE SPAR GROUP LIMITED
315. THE ZSHARES ETF SCHEME
316. TIGER BRANDS LIMITED
317. TONGAAT HULETT LIMITED
318. TRACKHEDGE (PTY) LIMITED
319. TRADEHOLD LIMITED
320. TRANS HEX GROUP LIMITED
321. TRANSPACO LIMITED
322. TREMATON CAPITAL INVESTMENTS LTD
323. TRENCOR LIMITED
324. TRUWORTHS INTERNATIONAL LIMITED
325. UCS GROUP LIMITED
326. UNIVERSAL INDUSTRIES CORP LTD
327. URANIUM ONE INC
328. VALUE GROUP LIMITED
329. VERIMARK HOLDINGS LIMITED
330. VILLAGE MAIN REEF GOLD MIN COMP LTD
331. VODACOM GROUP LIMITED
332. VUKILE PROPERTY FUND LIMITED
333. WESCOAL HOLDINGS LIMITED
334. WESIZWE PLATINUM LIMITED
335. WHITE WATER RESOURCES LIMITED
336. WILSON BAYLY HOLMES-OVCON LIMITED
337. WINHOLD LIMITED
338. WITWATERSRAND CONS GOLD RESOURCES
339. WOOLTRU LIMITED
340. WOOLWORTHS HOLDINGS LIMITED
341. YORK TIMBER HOLDINGS LIMITED
342. ZCI LIMITED
343. ZEDER INVESTMENTS LIMITED
344. ZURICH INSURANCE COMPANY S A LTD

FTSE/JSE ALSI

1. African Bank Invest
2. ArcelorMittal South Africa Ltd
3. Acucap Properties Limited
4. Advtech
5. Adcorp Holdings
6. Aveng
7. AECI
8. Afgri Ltd
9. African Oxygen
10. Anglo American
11. Adcock Ingram Holdings
12. Allied Technologies
13. Anglo Platinum
14. Anglogold Ashanti
15. Aspen Pharmacare Holdings
16. African Rainbow Minerals Ltd
17. Astral Foods Ltd
18. Argent Industrial
19. Absa Group
20. Allied Electronics Corp
21. Allied Electronics Corp Part Prf
22. AVI
23. Avusa
24. Brait SA
25. Barloworld
26. Business Connexion Group
27. Buildmax.
28. Bell Equipment
29. BHP Billiton
30. Blue Label Telecoms Ltd.
31. Brimstone Investment Corp N
32. Basil Read Holdings
33. Bidvest Group
34. Caxton & CTP
35. Country Bird Holdings
36. Cadiz Holdings
37. Compagnie Financiere Richemont AG
38. City Lodge Hotels
39. Clicks Group Ltd
40. Combined Motor Hldgs Ltd
41. Coronation Fund Managers
42. Cipla Medpro
43. Comair
44. Capital Property Fund
45. Ceramic Industries

46.	Cashbuild Ltd
47.	Capital Shopping Centres Group Plc
48.	Distribution and Warehousing Network
49.	Datacentrix Holdings
50.	Dimension Data Holdings
51.	Digicore Holdings
52.	DRD Gold
53.	Discovery Holdings
54.	Datatec
55.	Evraz Highveld Steel & Vanadium
56.	Emira Property Fund
57.	EOH Holdings Ltd.
58.	Eqstra Holdings
59.	Esorfranki
60.	Exxaro Resources
61.	Famous Brands
62.	Fortress Income Fund Ltd. (A)
63.	Fountainhead Property Trust
64.	Firstrand Limited
65.	Freeworld Coatings
66.	Gold Reef Resorts
67.	Gold Fields
68.	Gijima Group Ltd
69.	Grindrod
70.	Grand Parade Investments Ltd
71.	Group Five/South Africa
72.	Growthpoint Prop Ltd
73.	Harmony
74.	Hosken Cons Invest
75.	Hudaco Industries
76.	Hulamin
77.	Hospitality Property A
78.	Hospitality Property B
79.	Hyprop Investments Ltd
80.	Iliad Africa
81.	Illovo Sugar
82.	Impala Platinum Hlds
83.	Investec Ltd
84.	Investec PLC
85.	Imperial Holdings
86.	Invicta Holdings
87.	JD Group
88.	JSE
89.	KAP International Ltd
90.	Keaton Energy HoldingsLtd
91.	Kagiso Media Ltd

92. Kumba Iron Ore
93. Liberty Hldgs.
94. Lewis Group
95. Life Healthcare Group Holdings
96. Lonmin PLC
97. Medi-Clinicrp
98. Metropolitan Holdings
99. Metmar
100. Mondi Ltd
101. Mondi Plc
102. Mr Price Group
103. Merafe Resources
104. Massmart Holdings
105. Metair Investments Ord
106. MTN Group
107. Metorex Ltd
108. Murray & Roberts
109. Mvelaphanda Group
110. Nedbank Group
111. Northam Platinum
112. Nampak
113. Naspers
114. Netcare
115. Oceana Group
116. Octodec Investments
117. Old Mutual
118. Omnia Holdings Ltd
119. Optimum Coal Holdings
120. Palabora Mining
121. Pangbourne Prop Ltd
122. Petmin Ltd.
123. Pioneer Food Group
124. Peregrine Holdings
125. Phumelela Gaming & Leisure
126. Pick N Pay Stores
127. Premium Properties
128. Pretoria Portland Cement
129. Rainbow Chicken
130. Raubex Group
131. Redefine Properties
132. Reinet Investments
133. Remgro
134. Resilient Prop Inc Fd
135. Reunert
136. RMB Holdings
137. SABMiller

138. SA Corporate Real Estate Fund
139. Sappi
140. Standard Bank Group
141. Sasfin Holdings
142. Steinhoff International Holdings
143. Shoprite
144. Simmer And Jack Mines
145. Sanlam
146. Santam
147. Sentula Mining
148. Sasol
149. Super Group
150. The Spar Group
151. Stefanutti & Bressan Holding
152. Sun International Ltd
153. Spur Corp
154. Sycom Property Fund
155. Tiger Brands
156. The Foschini Group Ltd
157. Telkom
158. Tongaat Hulett
159. Trencor Ltd
160. Truworths International
161. Vukile Property Fund
162. Vodacom Group
163. Wilson Bayly Holmes-Ovcon
164. Wesizwe Platinum
165. Woolworths Holdings
166. Zeder Investments

FTSE/JSE SRI

1. African Bank Invest
2. ArcelorMittal South Africa Ltd
3. Advtech
4. AECI
5. African Oxygen
6. Anglo American
7. Allied Technologies
8. Anglo Platinum
9. Anglogold Ashanti
10. African Rainbow Minerals Ltd
11. Absa Group
12. Allied Electronics Corp
13. Allied Electronics Corp Part Prf

14. Barloworld
15. BHP Billiton
16. Bidvest Group
17. Clicks Group Ltd
18. Capital Shopping Centres Group Plc
19. DRD Gold
20. Discovery Holdings
21. Evraz Highveld Steel & Vanadium
22. Exxaro Resources
23. Firstrand Limited
24. Gold Fields
25. Grindrod
26. Group Five/South Africa
27. Growthpoint Prop Ltd
28. Harmony
29. Illovo Sugar
30. Impala Platinum Hlds
31. Investec Ltd
32. Investec PLC
33. JSE
34. Kumba Iron Ore
35. Liberty Hldgs.
36. Lonmin PLC
37. Medi-Clinicrp
38. Metropolitan Holdings
39. Mondi Ltd
40. Mondi Plc
41. Merafe Resources
42. Massmart Holdings
43. MTN Group
44. Murray & Roberts
45. Nedbank Group
46. Nampak
47. Netcare
48. Oceana Group
49. Old Mutual
50. Palabora Mining
51. Pick N Pay Stores
52. Pretoria Portland Cement
53. Rainbow Chicken
54. Remgro
55. RMB Holdings
56. SABMiller
57. Sappi
58. Standard Bank Group
59. Steinhoff International Holdings

60. Sanlam
61. Santam
62. Sasol
63. Sun International Ltd
64. The Foschini Group Ltd
65. Telkom
66. Tongaat Hulett
67. Truworths International
68. Vodacom Group
69. Woolworths Holdings