DOES DOING GOOD, DO GOOD: AN INVESTIGATION INTO SRI FUND PERFORMANCE IN SOUTH AFRICA

by

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A research report submitted to the
Commerce Faculty
in partial fulfillment of the requirements for the degree of

Master of Commerce in Financial Management

UNIVERSITY OF CAPE TOWN
COMMERCE FACULTY

February, 2011

DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work, and that I have not previously, in its entirety or in part, submitted it at any other university for a degree.

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DEFINITIONS / GLOSSARY

Term	Description
Alpha	Measures the difference between a portfolio's actual return and its expected performance, given its level of risk (as measured by its beta)
ALSI	The All Share Index on the Johannesburg Stock Exchange (it is used as a proxy for the general market)
Beta	Measures a portfolio's relative volatility, as compared to a standard market index, such as the ALSI (by definition a market's beta will always be equal to 1)
Binary	A two number system, which represents values using 2 symbols, namely 0 and 1
Capital asset pricing model	Used to determine a theoretically appropriate rate of return for an asset, if that asset is to be added to an already well-diversified portfolio, given that asset's non-diversifiable risk
CEO	Chief executive officer
CGR	Corporate governance rating
Contagion	The transmission of a financial shock in one entity to other interdependent entities
Contemporaneous	Originating, existing or happening during the same period of time
DY	Dividend yield
ESG	Environmental, social and governance
FTSE	FTSE Group is a world leader in the creation and management of over 120,000 equity, bond and alternative asset class indices
Idiosyncratic	Unique quality or characteristic
IRR	The internal rate of return on an investment is the annualized effective compounded return rate that can be earned on the invested capital
JSE	Johannesburg Stock Exchange
KLD	KLD Research and Analytics, Inc

R&D	Research and development
SRI	Socially responsible investing
"Sin" stocks	Shares in companies that are not considered to be socially responsible, i.e., controversial businesses such as alcohol, adult entertainment, abortion, tobacco and military armaments
US	United States of America

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ABSTRACT

Globally socially responsible investments ("SRI") have become increasingly topical over the last few years. In the United States ("US'), SRI has attracted significant investor attention, with the Social Investment Forum estimating that approximately 10% of all US investments are managed according to some screening process related to SRI. The interest and prevalence of SRI has necessitated extensive research in the field. KLD Research and Analytics, Inc ("KLD"), is a leader in the field of research and innovation in socially responsible investing for the past 20 years and its products and services are used by more than four hundred clients worldwide to integrate environmental, social and governance ("ESG") criteria into qualitative or exclusionary screening, compliance and asset gathering. Furthermore, in May 1990 it launched the Domini 400 Social index (a market capitalization weighted share index of 400 publicly traded US companies that have met certain standards of social and environmental excellence) and in a US environment, it serves as a benchmark of the performance of SRI shares.

In this paper the literature is reviewed to determine what exactly SRI is, and whether there has been evidence of the financial benefits of SRI compared to conventional portfolios internationally. It has been found that among the different opinions of SRI, four goals of SRI are central to understanding the concept. These goals are essentially to democratize the economy (by encouraging the employment and empowerment of the previously disadvantaged), to humanize the work environment (ensuring the safety and training of staff), rethinking profit distribution (dividends versus charitable giving and environmental campaigns) and convincing the business world that a corporate conscience

can pay. With regards to gaining evidence of the financial benefits of SRI compared to conventional portfolios, no greater clarity was obtained, since there was diverging results of the studies undertaken. These results ranged from views that there is no trade-off between the two different stock performances, while others show that SRI stocks outperform non-SRI stocks and also that "sin" stocks outperform SRI stocks.

As a result, a study to identify the financial benefit of SRI funds in a South African context is undertaken in this paper. The hypothesis that is tested (given the assumption of the social responsibility feature of a share not being priced), is whether the returns of a socially responsible portfolio or fund would be equal to the returns of a conventional portfolio. It is further assumed that an average investor would only be influenced by the financial returns available to him and once these financial returns have been met, social considerations might then influence the decision to invest.

The results of the study have shown that the alpha and excess returns generated by the SRI funds, when compared to the market benchmark, is not statistically significant over the longer term. It is, however, considered that for socially responsible investors this is good news. This paper also did not find evidence for the application of Merton's demand theory that the actual returns of socially responsible portfolios underperform the market, which intuitively is reflective of the relative infancy of socially responsible investing in South Africa.

This paper also considers the shortcomings of the research as a result of the lack of long-term data relating to SRI funds in South Africa. This is seen as an impediment in ascertaining the long-term financial benefits of SRI, but it is believed that it is only a matter of time before statistics will provide evidence of these benefits.

Chapter 1

INTRODUCTION

"The company is integral to society, particularly as a creator of wealth and employment. The company is the preferred vehicle in which to pool human and monetary capital. These are applied enterprisingly in the expectation of a return greater than a risk free investment such as a deposit in a bank. A survey by KPMG and the United Nations Environmental Programme has shown that while the first priority of stakeholders of a company is the quality of the company's product or service, the second priority is the trust and confidence that the stakeholders have in the company" (King (2009), p9). The credit crunch and its ensuing contagion effects has plunged the world into a recession which, after approximately 2 years of consumer despair, has only recently showing some signs of abating. At the same time, the world as we know it is at risk, with climate change and global warming resulting in flash floods, relentless droughts, devastating earthquakes and frequent volcanic activity.

It is within this milieu, that social responsibility has become topical and it has reached a worldwide audience. From a regulatory framework in South Africa, the King Report on Corporate Governance ("King III"), has been prominent in requiring company board of directors to adopt a triple-bottom line approach, by requiring the reporting of a company's endeavors towards sustainability as well as acknowledging the importance of all stakeholders, i.e., planet, people and profit.

But what exactly is SRI. Four goals of SRI have been identified (Lowry (1991), p61)

1. SRI involves strategies to democratize the economy in two important ways: firstly, the encouragement of the hiring, retention, and promotion of women and minorities and secondly, the increase of worker ownership in corporate America.
2. By recognizing the human price that has been paid in the workplace for much industrial development, SRI promotes practices to humanize the work environment. These include alternatives to the traditional assembly line and the promotion of a clean, safe, and rewarding work environment.
3. SRI involves rethinking the ways profit has been traditionally used and distributed.
4. Convincing the business world that a corporate conscience can pay.

There have, however, been others who have questioned the legitimacy of social responsibility criteria. Rudd has stated that "there is one important difference between social responsibility criteria and others. The latter are imposed on the manager solely be the investment considerations. It is true that they may be misguided, but the underlying rationale is defensible; namely, the aim is to protect the financial condition of the beneficiaries. Few of the social responsibility criteria have this property." (Rudd (1981), p. 61)

In the US, SRI has already begun attracting investor attention. The Social Investment Forum (www.socialinvest.org) has estimated that approximately 10% of all US investments are managed according to some screening process related to SRI. More specifically, socially responsible investing is considered a broad-based approach to

investing that now encompasses an estimated $3.07 trillion out of $25.2 trillion in the US investment market place currently. Social investors, who seek a financial return on investments, are also concerned with the non-financial dimensions of corporate performance, such as the impact on the environment, social relations, and corporate governance. It is this multi-dimensional nature of corporate performance that raises the question whether a trade-off exists between the financial dimensions of performance and the non-financial dimensions. Put differently, how does the investment return of SRI funds compare with a market benchmark return? Socially responsible investors include individuals and also institutions, such as corporations, universities, hospitals, foundations, insurance companies, public and private pension funds, non-profit organizations, and religious institutions. Institutional investors represent the largest and fastest growing segment of the SRI world. Intuitively, it is imagined that institutional investors, especially corporations, would only provide capital to socially responsible investments if the expected financial return is greater than any other alternative investments. Furthermore, provided that socially responsible investments would then be expected, by those institutions, to provide returns that would protect the "financial condition of the beneficiaries", which were thought by Rudd to only attain to the realm of non-socially responsible investments, the real difference between socially responsible investments and non-socially responsible investments should then be the non-financial broader-based return provided to the stakeholders. Quantifying this non-financial broader-based return is subjective, but its existence could become clearer if the financial returns from either the socially responsible investment portfolio or a conventional portfolio are similar.

An investigation into the literature is undertaken to ascertain the key themes that have arisen in comparing the performance of SRI funds / portfolios, internationally. Yet, the findings don't reveal a clear picture. Whereas one group states that there is no trade-off between the two different stock performances, others show that SRI stocks outperform non-SRI stocks or that "sin" stocks outperform SRI stocks. Other studies focus on the theoretical influence of investor demand, (by the application of Merton's demand theory to socially responsible investing) and the subsequent consequences for corporate governance.

Socially responsible investing and SRI funds are not new in South Africa, but its popularity has certainly grown with the JSE's launching of its SRI index in May 2004. Despite, this injection of popularity, the literature is void of investigations into the financial performance of socially responsible investments in South Africa compared to conventional investments. As a result, this paper intends to provide an initial foray into investigating the financial performance of socially responsible investments in a South African context. The approach into the investigation into SRI performance in South Africa begins with the construction of five hypothetical SRI funds, weighted according to free float market capitalization and also weighted according to the ratings achieved in respect of the positive and negative EGS investment screens applied. These hypothetical SRI funds, together with four other active SRI funds' performance is compared to the alpha generated, the excess returns achieved over the market benchmark, and their dividend yield analysis. Furthermore, this paper will compare the JSE's SRI index to the ALSI index for the period 1 January 2005 and 31 December 2009.

It is important to recognize that investing in socially responsible funds is one aspect in the journey to becoming socially responsible citizens of this planet – investments in socially responsible funds will not change the world, but they are part of the process of changing oneself to the person one aspires to be. "Often socially responsible investors express the impetus to manage their money under social criteria as a desire for an integration of money into one's self and into the self one wishes to become. An institution may strive for consistency between its mission and the way it achieves that mission. In both instances, this motivation comes from within." (Domini (1992), p. 7)

Chapter 2

LITERATURE REVIEW

2.0 Summary:

Based on the recent literature, most empirical studies suggest no statistically significant trade-off since there is little difference between the returns of stocks satisfying SRI criteria (e.g. benchmarks with which to measure a company's endeavors for sustainability, in terms of environmental, social and governance objectives) (Hamilton, 1993; Bello, 2005). Specific countries did, however, show evidence of SRI fund underperformance when compared to conventional funds. Furthermore, it was also found that high SRI screening intensity constrains performance. Alternatively, research has also shown that higher expected returns have been reported for stocks that are excluded from a portfolio because of negative ethical issues, i.e., companies producing alcohol, tobacco and gaming (Hong, 2007). Moreover, these "sin stocks" provided greater financial return during times of recession than socially responsible investments (Ozkan and Xiong, 2009). From a governance perspective, Black (2001), Klapper and Love (2004) and Drobetz et al. (2004) constructed a survey-based governance index and report that better-firm level corporate governance is associated with higher firm valuation. Furthermore, per Galema et al. (2008) the theoretical work on the relationship between SRI and expected returns focuses on the discrepancies in prices that are the result of demand differences for different types of stocks.

These issues are discussed in more detail in the following sections:

2.1 No trade-offs exist

Hamilton et al (1993) defined "socially responsible" investors as those who favour certain companies over others according to criteria such as production of weapons or use of alternative energy sources. They found that socially responsible mutual funds do not earn statistically significant excess returns and that the performance of such funds is not statistically different from the performance of conventional mutual funds.

Bello (2005) used a sample of socially responsible stock mutual funds matched to randomly selected conventional funds of similar net assets to investigate differences in characteristics of assets held, portfolio diversification, and variable effects of diversification on investment performance. It was found that socially responsible funds do not differ significantly from conventional funds in terms of any of these attributes. Moreover, the effect of diversification on investment performance is not different between the two groups. Both groups underperformed the Domini 400 Social Index (a market capitalization weighted stock index of 400 publicly traded American companies that have met certain standards of social and environmental excellence and S&P 500 (a free float capitalization weighted index published since 1957 of the prices of 500 large capitalization common stocks actively traded in the US) during the study period.

2.2 SRI funds underperform conventional funds and higher SRI screening intensity constrains performance

Renneboog et al (2008) undertook a study whereby the main hypothesis was that ethical / social / environmental / governance considerations influence the stock prices and that investors pay a price for the use of SRI screening by funds. It was found that SRI funds in many European, North-American and Asia-Pacific countries strongly underperform domestic benchmark portfolios. Furthermore, it was found that based on the results on the determinants of SRI funds' returns and risk loadings suggest that screening activities of the SRI funds matter. Essentially, funds with a higher number of corporate governance and social screens yield lower risk-adjusted returns.

2.3 SRI stocks outperform non-SRI stocks

Derwall et al (2005) undertook a study which focused on the concept of "eco-efficiency", which can be thought of as the economic value that a company creates relative to the waste it generates, and found that SRI produced superior performance. This focused exclusively on the environmental element of social responsibility. Based on Innovest Strategic Advisors' corporate eco-efficiency scores, the study constructed and evaluated two equity portfolios that differed in eco-efficiency. The higher ranked portfolio provided substantially higher average returns than its lower ranked counterpart over the 1995 to 2003 period. This performance differential could not be explained by differences

in market sensitivity, investment style, or industry-specific factors. Moreover, the results remained significant for all levels of transaction costs, suggesting that the incremental benefits of SRI can be substantial.

It was concluded that the results were somewhat puzzling, in the sense that it is difficult to explain the observed performance differential using conventional asset pricing theory, and particularly the well-established return-risk paradigm. The fact that common risk factors fail to account fully for the observed results raises the possibility of a mispricing story.

2.4 "Sin" stocks outperform SRI stocks

Hong and Kacperczyk (2007) provided evidence for the effects of social norms on markets by studying "sin" stocks—publicly traded companies involved in producing alcohol, tobacco, and gaming (and other controversial businesses). They hypothesized that there is a societal norm against funding operations that promote vice and that some investors, particularly institutions subject to norms, pay a financial cost in abstaining from these stocks. Consistent with this hypothesis, they found that sin stocks are less held by norm-constrained institutions such as pension plans as compared to mutual or hedge funds that are natural arbitrageurs, and they receive less coverage from analysts than do stocks of otherwise comparable characteristics. Sin stocks also have higher expected returns than otherwise comparable stocks, consistent with them being neglected by norm-constrained investors and facing greater litigation risk heightened by social

norms. Evidence from corporate financing decisions and the performance of sin stocks outside the US also suggest that norms affect stock prices and returns.

Ozkan and Xiong (2009) investigated whether sin stocks under or over perform the SP500 for different investment periods, i.e., most of the time and especially during the recession periods. It was found that the constructed portfolio of sin stocks is able to provide recession-proof returns to the investors. The majority of the time, industry sub-portfolios under sin stocks also provides superior results than the market. Furthermore, evidence was presented that the risk-return characteristics of sin stocks are superior compared to the market as well as socially responsible stocks.

2.5 Results of governance based indices

Black (2001) examined the relationship between corporate governance behaviour and market value for a sample of 21 Russian firms. Corporate governance rankings for these firms, developed by a Russian investment bank, were used. Secondly the 'value ratio' of actual market capitalization to potential Western market capitalization for these firms, determined independently by a second Russian investment bank, was used. The correlation between the value ratio and governance ranking was striking and statistically strong. A worst to best governance improvement predicted a 700-fold increase in firm value. These results were tentative because of the small sample, but they suggested that corporate governance behaviour has a powerful effect on market value in a country where legal and cultural constraints on corporate behaviour are weak.

Klapper and Love (2004) used data on firm-level corporate governance rankings across 14 emerging markets and found that there is wide variation in firm-level governance in the sample and that the average firm-level governance is lower in countries with weaker legal systems. The determinants of firm-level governance were explored and it was found that governance is correlated with the extent of the asymmetric information and contracting imperfections that firms face. It was also found that better corporate governance is highly correlated with better operating performance and market valuation. Furthermore, evidence was provided that firm-level corporate governance provisions matter more in countries with weak legal environments.

Drobetz et al (2004) investigated whether differences in firm-specific corporate governance also helped to explain expected returns in a cross-section of firms within a single jurisdiction. Once a corporate governance rating ("CGR") for German firms were constructed, a positive relationship between the CGR and firm value was identified. In addition, there was strong evidence that expected returns are negatively correlated with the CGR, if dividend yields and price-earnings ratios were used as proxies for the cost of capital. Most results were robust for endogeneity, with causation running from corporate governance practices to firm fundamentals. An investment strategy that bought high-CGR firms and shorted low-CGR firms would have earned abnormal returns of around 12 percent on an annual basis during the sample period.

2.6 Influence of investor demand

Merton (1987) provided a theoretical framework whereby (i) contemporaneous stock returns are positively related to changes in investor recognition, (ii) future stock returns are negatively related to changes in investor recognition, (iii) the above relations are stronger for stocks with greater idiosyncratic risk and (iv) corporate investment and financing activities are both positively related to changes in investor recognition. The framework suggests that investors and managers who are concerned with firm valuation should consider investor recognition in addition to accounting information and related investment fundamentals. The theory is essentially based on the assumption of a market with incomplete information. The application to socially responsible investing is largely theoretical, but needs to be considered. It is imagined that the growth of socially responsible investing will be so significant that those providing information on company shares (analysts) would be more focused on the demands of socially responsible investors and as a result provide more information in respect of socially responsible companies than non-socially responsible companies. While the share prices of those covered socially responsible companies would price the new information available quicker, the neglected (non-socially responsible companies) would lag behind. As a result, the probability of achieving excess returns would be weighted towards the neglected shares as these shares would essentially be underpriced.

Galema et al (2008) relate US portfolio returns, book-to-market values and excess stock returns to different dimensions of socially responsible performance. It was found that the

SRI impact on stock returns is effectively by lowering the book-to-market ratio and not by generating positive alphas. The result is consistent with the theoretical work suggesting that SRI is reflected in demand differences between SRI and non-SRI stock. It also explains why so few studies are able to establish a link between alpha's and SRI.

Chapter 3

OVERVIEW OF CURRENT SRI SCREENING TOOLS

3.1 Screening criteria used by KLD Research and Analytics

For this study, the screening criteria used by KLD Research and Analytics, Inc ("KLD") have been applied on all those companies listed on the Johannesburg Stock Exchange ("JSE") as well as on another stock exchange ("dual-listed companies"). Other researchers have used the KLD database when investigating the relationship between financial performance and SRI (e.g., Hillman and Keim, 2001; Kempf and Osthoff, 2007). KLD uses screens to monitor SRI and it has expanded its universe of coverage as follows: In the 1990's it covered the S&P 500 Index and the Domini 400 Social Index. In 2001 the database was extended to include all constituents of the Russell 1000. In 2003 the database was further extended to include all stocks from the Russell 2000 as well. Unfortunately, KLD does not have historical ratings data for non-US companies, unless it is a member of the S&P 500, hence the type of research undertaken from a South African perspective.

KLD uses multiple criteria on which firms are evaluated using both positive and negative screens. Positive screens indicated strengths and negative screens indicate weaknesses of the firm. Each screen is a binary variable that reflects whether the firm meets the

particular criterion. The screens are summarized in groups of corresponding items referring to a general theme.

These screens are detailed as follows (KLD (2007)):

Table 1: Screening criteria applied by KLD

Environment ratings	Climate change	*Strength*	Clean energy
		Weakness	Derivation of substantial revenue (directly or indirectly) from the sale of coal or its derivative products
	Product & services	*Strength*	Beneficial products and services
		Weakness	Ozone depleting chemicals, agricultural chemicals
	Operations & management	*Strength*	Pollution prevention; recycling; management systems
		Weakness	Hazardous waste; regulatory problems; substantial emissions
Social ratings	Community	*Strength*	Charitable giving; innovative giving; support for education, housing; volunteer programs
		Weakness	Investment controversies; negative economic impact; tax disputes
	Diversity	*Strength*	Board of directors; CEO; employment of the disabled; gay & lesbian policies;

			promotion; women & minority contracting; work/life benefits
		Weakness	Controversies; non-representation
	Employee relations	*Strength*	Health and safety; retirement benefits; union relations; cash profit sharing; employee involvement
		Weakness	Union relations; health and safety; retirement benefits; workforce reductions
	Human rights	*Strength*	Labour rights; relations with indigenous peoples
		Weakness	Labour rights; relations with indigenous peoples
	Product	*Strength*	Benefits to economically disadvantaged; quality; R&D / innovation
		Weakness	Antitrust; marketing / contracting controversy; safety
Governance ratings	Reporting	*Strength*	Political accountability; transparency
		Weakness	Political accountability; transparency
	Structure	*Strength*	Compensation; ownership
		Weakness	Compensation; ownership; accounting

3.2 Screening criteria applied in constructing the SRI index per the Johannesburg Stock Exchange ("JSE")

The JSE launched the SRI index in South Africa in May 2004. The communicated objectives (JSE (2007)) of the SRI are to:

1. Identify those companies listed on the JSE that integrate the principles of the triple bottom line and good governance into their business activities.
2. Provide a tool for a broad holistic assessment of company policies and practices against globally aligned and locally relevant corporate responsibility standards.
3. Serve as a facilitation vehicle for responsible investment for investors looking for non-financial risk variables to include in investment decisions, as such risks do carry the potential to have significant financial impacts.
4. Contribute to the development of responsible business practice in South Africa and beyond.

The key features of the SRI index in South Africa are as follows:

1. The index philosophy is founded on the principles of the three pillars on the triple bottom line, namely environmental, social and economic sustainability, with good corporate governance underpinning each. These pillars are encapsulated in the index indicators, which are then structured along the categories of Environment, Society and Governance and related sustainability concerns ("ESG").

2. Alignment with global standards while reflecting the complex nature of social responsibility in South Africa.
3. Evolving criteria to reflect continuous development of both the concepts and practices of SRI and sustainability.
4. Annual review of company policies, management systems and performance, and reporting.
5. The SRI index criteria continuously evolve to align more closely with global benchmarks, while remaining reflective of local developments.

The criteria themes applied in determining the SRI index in South Africa are tabled as follows:

Table 2: Screening tool applied in constructing the SRI index in South Africa

Environment	A company should continually seek to improve its environmental performance by:	▪ Working to reduce and control its direct negative environmental impacts ▪ Promoting awareness of its significant direct and indirect impacts ▪ Working to use natural resources in a sustainable manner ▪ Committing to risk reduction, reporting and auditing
Society	A company should	▪ Treating all stakeholders with

	demonstrate a commitment to social responsibility and good stakeholder relationships by:	dignity, fairness and respect, recognizing their rights to life and security and free association, and their rights to freedom from discrimination ▪ Actively promoting the development and empowerment of its employees and the community ▪ Ensuring that core labour standards are met and good employee relations maintained ▪ Working to promote health and safety of its employees
Governance and related sustainability concerns	A company should:	▪ Uphold and support good corporate governance practices as the foundation for its business policies and practices, through strategies to achieve and maintain internationally recognised corporate governance standards and implementing sound ethical practices

	▪ Work towards long term growth and sustainability by assessing and managing the risks to sustaining its business while adapting to changing demands, trends and macro-economic driving forces ▪ Identify and manage the broader impact of the company within the company's sphere of influence or where the company operates from a social, environmental, ethical and economic perspective, directly as well as indirectly

3.3 SRI index construction and the application of free float market capitalization

South Africa was aligned with global best practice in terms of market index construction with the introduction of the FTSE / JSE Africa Index series on 24 June 2002. As a result, the JSE indices, together with the newer SRI index are based on a system of free float market capitalisation (Pheiffer (2002) 14 July). The application of free float market capitalisation results in the weightings of each index being based on the number of freely tradable shares in each index's constituent stocks. A stock's free float is reduced by

cross holdings, tightly held family control and shares locked up in employee incentive schemes. The shares with the greater free float will therefore have the greater part of their market capitalisation included in the new indices. There is a fixed scale dictating how free float percentage translates into participation in the new indices but constituent stocks with free float percentages greater than 75% will have their entire market capitalisation included in the new indices.

Despite the advantages of aligning with global best practice and also allowing the market index to reflect market movements, free float market capitalisation has the disadvantage in that it does raise some problems for asset managers who use the indices for benchmarking the performance of their funds, while still being required to adhere to local prudential guidelines in respect of the management of retirement funds. To illustrate this issue, one needs to consider that in order for an index to be considered a good benchmark, it needs to be investable, i.e., investors should be able to replicate the index on their own (New England Pension Consultants, 2001). In a South African context registered retirement funds are prescribed limits in respect of their investable assets by Regulation 28 of the Pensions Fund Act of 1956. The limits prescribed for investments in listed shares are 15% of total assets per company with a market capitalisation above R 2 billion and 10% of total assets per company with a market capitalisation below R 2 billion (there is currently draft regulation in place which amends the market capitalisation figure to R 20 billion). Irrespective of the market capitalisation figure, the SRI index at 31 December 2009 would have fallen foul of the prescribed limits since the free float market capitalisation weighting attributed to BHP Billiton was approximately 16.48%. As a result, any asset manager who wishes to manage a SRI fund, using the SRI index as

a benchmark of performance, would face a crossroads: Manage a non-Regulation 28 compliant fund using the SRI index as a benchmark and lose out on funds under management from registered retirement funds, but potentially gaining in performance fees, OR manage a Regulation 28 compliant fund and attracting funds under management from registered retirement funds, but having its performance measured against a non-Regulation 28 compliant SRI index. It is interesting to note that it would appear that most managers would chose the former, but this may be because of the difficulty of encouraging retirement funds to move their investments over to SRI funds, since there is no long-term track record available with respect to SRI funds in South Africa to compel such a move.

The JSE is aware of this problem and have communicated that the construction of a more appropriate benchmark will be considered once these indices have been bedded down. At the time of writing this paper, the JSE indices are still based solely on free float market capitalisation.

3.4 Screening applied by South African Investment Managers

An analysis of screening methods applied currently would not be complete without considering the screening processes of a number of South African investment managers with SRI equity funds.

3.4.1 **Futuregrowth SRI Equity Fund** (Futuregrowth, 2010)

The Futuregrowth SRI Fund is based on the SRI priniciples of the JSE SRI index and includes listed companies that integrate corporate social responsibility and performance,

with business activities. In keeping with King II (it is assumed that King III would apply going forward) on Good Corporate Governance the index advocates that companies adopt a more inclusive approach to business in order to achieve a balance between performance and compliance in consideration of all stakeholders.

The quality of a company's strategy and management and its performance in dealing with opportunities and risks deriving from economic, environmental and social developments can be quantified and used to identify and select leading companies for investment purposes. Leading sustainability companies display high levels of competence in addressing global and industry challenges in a variety of areas:

- **Strategy**: Integrating long-term economic, environmental and social aspects in their business strategies while maintaining global competitiveness and brand reputation.
- **Financial**: Meeting shareholders' demands for sound financial returns, long-term economic growth, open communication and transparent financial accounting.
- **Customer and product**: Fostering loyalty by investing in customer relationship management, and product and service innovation that focuses on technologies and systems, which use financial, natural and social resources in an efficient, effective and economic manner over the long-term.
- **Governance and stakeholder**: Setting the highest standards of corporate governance and stakeholder engagement, including corporate codes of conduct and public reporting.

- **Human**: Managing human resources to maintain workforce capabilities and employee satisfaction through best-in-class organizational learning and knowledge management practices, and remuneration and benefit programs.

3.4.2 **Investec IAL RI Equity Fund** (Investec, 2010)

Investec RI Equity is a responsible investment equity portfolio focused on investing in high quality, attractively valued companies with compelling ESG characteristics. The portfolio aims to deliver returns in excess of those available in the equity market over 3 to 5 year rolling periods. Investec RI Equity is distinguished from other equity funds in its integration of ESG factors within traditional fundamental approach, and it aims to achieve its objectives through:

- An ESG thematic approach which identifies those companies best positioned to benefit from the emerging and dominant environmental and / or social trends, and which are cognizant of the risks and opportunities inherent to these.
- A screened universe which identifies companies with quality ESG reporting as well as appealing valuation, i.e., characteristics seen as a proxy for potential quality investment ideas.
- Leveraging the benefit of engagement as a mechanism for enhancing and unlocking long term value.

3.4.3 **SIM SRI Equity Fund** (Sanlam, 2010)

Sanlam Investment Management engages the services of a research broker to develop and integrate an ESG screen into their investment decision-making process. This screen

is used to develop a corporate governance score for potential investee companies across a number of measures, including board structure, directors, remuneration practices, capital structure, auditing and accounting, and a number of integrated sustainability factors. The corporate governance score is used to evaluate and measure governance risk as well as to develop proxy voting recommendations and the assessment of company policy.

The SIM SRI Equity fund invests in socially and environmentally responsible companies. The aforementioned SRI selection criteria and investment process establishes an investable universe of shares (based on research that underlies the JSE SRI index).

3.4.4 **Community Growth Equity Fund** (Old Mutual, 2010)

Unity Incorporation, founded in 1992 (on the advent of the South Africa's first democratic election), is the investment arm of a group of eight trade unions affiliated to both the Congress of South African Trade Unions ("Cosatu") and the National Council of Trade Unions ("Nactu"), South Africa's biggest trade union confederation. Unity Incorporation ensures the incorporation of SRI principles in the investment making-decision process of the Community Growth Equity Fund.

The current criteria to assist the portfolio manager to choose the right type of share in socially responsible companies are as follows:

- **Job creation through innovation and growth**: Companies which are innovating, expanding and investing for growth will be companies which are creating jobs. Senior management of potential investee companies will be asked

probing questions about their plans and strategies and assess their ability to innovate and invest for job creation.

- **Training and development of workers in order to enhance skills**: All workers must be skilled, and to achieve this, company training programmes and grading systems must be transformed to provide clear career paths for all employees. This will facilitate skill acquisition and lead to higher productivity and higher wages. Artificial barriers to upgrading and skills training will be exposed. There must be evidence of union and worker participation in decisions on training.
- **Economic and social empowerment**: Potential investee companies will espouse high levels of worker empowerment. Worker empowerment will be rated high where there is strong worker participation in training, affirmative action, and health and safety, advanced union rights and centralized bargaining. Union involvement in decisions over company restructuring will be scrutinized closely. Companies which are committed to creating genuine economic opportunities for emerging black businesses will be looked at favourably.
- **Equity through affirmative action in the workplace**: Potential investee companies should have carefully planned and meaningful affirmative action programmes that will get the most out of their workforce – at the same time offering new opportunities for advancement. Programmes within the company should focus on the advancement of women, black employees and the disabled. Affirmative action is seen as closely linked to a company's training programmes.
- **Good conditions of employment**: Potential investee companies' wages and benefits need to be at least above the industry's average. Special focus will be

given to the company's minimum wage. Companies which outsource work must ensure that conditions of employment are above industry standards and unions can operate freely.

- **Sound environmental practices must be promoted**: Potential investee companies' products and procedures must care for people and the environment. Close attention would be paid to companies to ensure they put in place policies and practices which will protect the environment. Companies which have regular independent environmental audits will be favourably assessed.
- **High health and safety standards must be applied**: Potential investee companies must have good health and safety records. The portfolio manager is encouraged to rely mainly on the reports of employees and the actual safety record of a company in judging its attitude to health and safety. The involvement of trade unions in health and safety will be further evidence of high standards at the company.
- **Demonstrate open and effective corporate governance**: Special focus is to be given to corporate governance. The portfolio manager will ensure that companies meet at least the King Committee's Code of Corporate Practices. The role of directors will come under scrutiny. Full disclosures of directors' pay, the appointment of independent remuneration and audit committees, and evidence of effective communication with all stakeholders will be required.

Chapter 4

HYPOTHESIS

4.1 Hypothesis statement

The relationship between risk and return is a fundamental financial relationship that affects the expected return on every asset. Intuitively, it is clear that where a company is socially responsible, this could affect the risk profile of the company. However, since the SRI impact on the risk profile of the company, cannot currently be quantified, using conventional pricing theory, there should be no difference between the expected returns available from socially responsible investments and those available from a conventional investment portfolio. The primary hypothesis, is therefore, that the returns available from a socially responsible investment portfolio is equal to the returns available from a conventional portfolio. If the differences in returns from those portfolios are statistically significant, it could imply that the SRI impact has not been priced in.

Hypothesis 1: Returns available from SRI portfolios are equal to those available from conventional portfolios

Hypothesis 2: Returns available from SRI portfolios are not equal to those available from conventional portfolios

Social responsible portfolios are constructed from a universe of socially responsible and non-socially responsible shares, but would only include those shares deemed socially responsible. Alternatively, conventional portfolios are constructed from a universe of

socially responsible and non-socially responsible shares, but would include **both** socially responsible and non-socially responsible shares. As a result, socially responsible portfolios and conventional portfolios would not necessarily be mutually exclusive. In South Africa, a SRI index exists, which has been constructed from the ALSI index (which is essentially tracks the universe of socially responsible and non-socially responsible shares, subject to certain market capitalization requirements). It is assumed that an investor, would generally, only be influenced by the financial returns available to him (traditionally generated by a conventional portfolio) and once these financial returns have been met, social considerations might influence the decision to invest. In order to test the hypothesis, the benchmark against which returns from socially responsible portfolios would be tested is the ALSI index, since it would encompass the benchmark market return of a conventional portfolio.

Despite this position, an application of Merton's demand theory states that socially responsible investors will have the ability to impact on share prices, indirectly, in a market of incomplete information. Socially responsible investors, demanding information in respect of socially responsible companies, act on the positive information and thereby increase the value of socially responsible companies relative to the value of conventional companies, where there is a lack of demand for information by driving down the expected returns and costs of capital of socially responsible companies.

Derived from Merton's position, the actual returns of socially responsible portfolios would underperform the conventional portfolios, as a result of the information asymmetry.

Chapter 5

DATA AND METHODOLOGY

Although socially responsible investing has become more topical with the likes of Sanlam, Cadiz, Investec, Old Mutual and Futuregrowth, amongst others, having launched SRI funds, the amount of publicly available data that is accessible to do a complete review of active SRI fund performance in South Africa is minimal. In order to compensate for this, five hypothetical SRI funds have been constructed and their returns have been compared to the market benchmark (ALSI index) and the performance of selected active SRI funds. These hypothetical portfolios have been constructed, essentially to observe whether there are any differences in the returns generated by using alternative weightings, in order to compensate for the perceived disadvantages of using free float market capitalisation (as per section 3.3). The weightings that are considered are discussed in sections 5.1.1 to 5.1.5.

Publicly available and downloadable fund fact sheets were obtained to complete the data set. These SRI funds are the Futuregrowth SRI Equity Fund, the Community Growth Equity Fund, the SIM SRI Equity Fund and the Investec IAL RI Equity Fund.

5.1 Construction of hypothetical SRI portfolios

The literature, together with the screening mechanisms used by KLD and the JSE (in constructing the SRI index) is based on the construction of portfolios where the

respective companies have shown evidence of their current endeavours in reaching a required level of social responsibility. As a result, more companies are added to or removed from the list of socially responsible companies and the respective weightings of the constituents are reviewed on a periodic basis. In constructing a hypothetical SRI portfolio it is assumed that social responsibility is a long-term objective and where companies have shown a propensity or desire for social responsibility in the future, they will then be included in the modified SRI portfolio. From a practical perspective, this means that the end point dictates the starting point of the research, in that those dual-listed companies that qualify as socially responsible will result in a modified SRI portfolio of which the constituent weighting would remain static for the period under review.

The screening criterion used by KLD has been applied to the most recent annual report made available on the respective dual-listed company's official website. Where websites are inaccessible these companies are immediately removed from the modified SRI portfolio. Those companies involved in controversial businesses, i.e., abortion, adult entertainment, alcohol, contraceptives, firearms, gambling, military, nuclear power and tobacco, are also immediately removed from the modified SRI portfolio.

Each dual-listed company qualifying as socially responsible is rated by applying a binary rating under the respective positive and negative screens in respect of the environmental, social and governance themes. The total rating achieved by the dual-listed company, is the sum of the binary ratings achieved. The five hypothetical SRI portfolios were constructed as follows:

5.1.1 **Hypothetical SRI fund weighted according to free float market capitalisation** ("LF SRI Fund FFW")

All dual-listed companies with positive total binary ratings are included in the hypothetical SRI fund. Constituent qualifying companies are then weighted according to their free float market capitalisation at 31 December 2009. No annual changes to the constituent companies' weighting are made for the investment period 1 January 2005 to 31 December 2009.

5.1.2 **Hypothetical SRI fund weighted according to total binary rating** ("LF SRI Fund TRW")

All dual-listed companies with positive total binary ratings are included in the hypothetical SRI fund. Constituent qualifying companies are then weighted according to their total binary rating. No annual changes to the constituent companies' weighting are made for the investment period 1 January 2005 to 31 December 2009.

5.1.3 Hypothetical SRI fund weighted according to total environmental binary rating ("LF SRI Fund ERW")

All dual-listed companies with positive total environmental binary ratings are included in the hypothetical SRI fund. Constituent qualifying companies are then weighted according to their total environmental binary rating. No annual changes to the

constituent companies' weighting are made for the investment period, 1 January 2005 to 31 December 2009.

5.1.4 **Hypothetical SRI fund weighted according to total social binary rating** ("LF SRI Fund SRW")

All dual-listed companies with positive total social binary ratings are included in the hypothetical SRI fund. Constituent qualifying companies are then weighted according to their total social binary rating. No annual changes to the constituent companies' weighting are made for the investment period, 1 January 2005 to 31 December 2009.

5.1.5 **Hypothetical SRI fund weighted according to total governance binary rating** ("LF SRI Fund GRW")

All dual-listed companies with positive total governance binary ratings are included in the hypothetical SRI fund. Constituent qualifying companies are then weighted according to their total governance binary rating. No annual changes to the constituent companies' weighting are made for the investment period, 1 January 2005 to 31 December 2009.

5.2 Analysis of SRI performance

The investment performance of SRI funds are normally reported in 1 year, 3 year and 5 year categories. The analysis of SRI performance which follows, takes these reporting performance measures into consideration and the following performance analysis is undertaken:

5.2.1 Comparison of expected return using the capital asset pricing model

A simplified model of the expected return of the portfolio has been adopted, since the data relating to the weighting of the component assets of the active SRI funds could not be obtained. As a result, the expected return of the respective portfolios has been weighted according to the sector asset allocations within each portfolio. It is accepted that although the accuracy of the expected portfolio returns have been sacrificed, the benefit is that a consistent basis of comparison between the respective portfolios has been achieved. The simplified model of the expected return is expressed as follows:

Portfolio return: $E(R_p) = \sum_i W_i E(R_i)$

Where:

Ri is the expected return of the asset sector

Wi is the weighting of the asset sector

Rp is the expected return of the SRI portfolio

Sector return: $E(R_i) = R_f + MRP*\beta_i$

Where:

Rf is the risk free rate *(3 month treasury bill data obtained from the South African Reserve Bank have been used for the period under review)*

MRP is the market risk premium *(it is common practice in South Africa to use a 6% market risk premium)* (Pricewaterhousecoopers, 2010)

β_i is a simple average of the beta estimates for the constituent sector companies *(this has been determined using beta estimates at 30 June 2009 for all companies listed on the JSE – the beta estimates were calculated by Cadiz Financial Risk Services)*

5.2.2 Comparison of the SRI index and the ALSI index

Monthly closing index values were obtained from the JSE for the SRI index and the ALSI index.

5.2.3 Comparison of excess returns of SRI funds

Actual returns were determined as follows:

- Hypothetical SRI funds: The internal rate of return ("IRR") was calculated for these funds over the investment holding periods 1 January 2009 to 31 December 2009 ("1 year"), 1 January 2007 to 31 December 2009 ("3 years") and 1 January 2005 to 31 December 2009 ("5 years"). Dividends were excluded in the

calculation of the respective IRR to add conservatism to the returns of the hypothetical SRI funds. Furthermore, the ALSI index value excludes dividends, and as a result a fairer comparison is achieved. Dividend yields would, however, be analysed in another section

- Active SRI funds: Actual returns were obtained from the publicly available fund fact sheets of the respective funds.
- ALSI index: The internal rate of return was calculated for the ALSI index over the investment holding periods 1 January 2009 to 31 December 2009 ("1 year"), 1 January 2007 to 31 December 2009 ("3 years") and 1 January 2005 to 31 December 2009 ("5 years")

5.2.4 Dividend yield analysis

Dividend yields for the investment holding period 1 January 2009 to 31 December 2009 ("1 year"), 1 January 2007 to 31 December 2009 ("3 years") and 1 January 2005 to 31 December 2009 ("5 years") were calculated for the hypothetical SRI funds and compared to the dividend yields earned per the ALSI index.

Chapter 6

EMPIRICAL OBSERVATIONS

6.0 Summary

Alpha's generated over the expected returns of the respective SRI funds, for each of the investment holding periods tested, were found to be statistically significant. This finding in itself, cannot, however, provide conclusive proof of the inappropriateness of conventional asset pricing models to incorporate the social dynamic of SRI funds. The investment holding periods covered the most turbulent times in South African and global markets. It is presumed that, as a result of the absence of "recession-proof" sin stocks as constituents in the SRI funds, the risk diversification benefits thereof was lost, resulting in greater perceived volatility of the SRI funds.

The performance of the JSE launched SRI index is very similar the ALSI index as a result of the majority of the constituents of the SRI index being made up of the ALSI Top 40 shares and the fact that both indices are constructed according to the free float market capitalisation. Despite the disadvantage of the constituents of the two indices not being mutually exclusive, the way the SRI index is constructed does not reward those constituents with a higher degree of social responsibility with a greater weighting. As a result, hypothetical SRI funds were constructed according to each component of social, which would reward those constituents with greater levels of social responsibility with greater weightings in the respective hypothetical SRI funds.

It was found that the differences in returns generated by the SRI funds and the conventional funds were not statistically significant over the longer term. Over a 1 year investment holding period, however, those differences in returns were found to be statistically significant. Since the 1 year holding period covered a period of market recovery, the lack of risk diversification benefits as a result of the absence of recession-proof sin stocks from the SRI funds, together with the general optimism of the market, led to the statistically significant outperformance over the conventional funds.

With respect to the differences in dividend yields between SRI funds and conventional funds, it was found that these differences were statistically significant over the longer term. Over the 1 year investment holding period, however, those differences were found to not be statistically significant. Intuitively, given that the returns over the longer term were found to be similar and the dividend yields provided by the SRI funds over the same period were in excess of the dividend yields provided by the conventional fund, it indicates the possibility of potential under-pricing of the constituents of the SRI funds.

6.1 Comparison of expected return using the capital asset pricing model

6.1.1 Expected return and resulting alpha analysis over a 1 year holding period

Table 3: Expected return versus actual return analysis

FUND	INCEPTION	E (R - 1 year)	Actual return	Alpha
LF SRI Fund FFW	n/a	12.6%	36.7%	24.1%
LF SRI Fund TRW	n/a	11.9%	32.6%	20.7%
LF SRI Fund ERW	n/a	11.9%	32.7%	20.7%
LF SRI Fund SRW	n/a	11.9%	33.9%	21.9%
LF SRI Fund GRW	n/a	12.0%	32.4%	20.4%
SRI index	May-04	12.3%	48.6%	36.3%
Community Growth Equity Fund	June-92	11.9%	30.9%	19.0%
SIM SRI Equity Fund	January-09	12.3%	46.0%	33.7%
Investec IAL RI Equity Fund	June-08	11.5%	33.4%	21.9%
mean		**12.0%**	**36.3%**	**24.3%**
standard deviation				**2.1%**
P(t<=t) two tail				**0.0%**
t Stat				***(11.67)***
t-critical (two tail)				**2.3**

For the investment holding period 1 January 2009 to 31 December 2009, alpha was generated by all the SRI funds. Alpha is defined as the excess return achieved over a agreed upon benchmark. The benchmark used in this study is the expected return as calculated by the capital asset pricing model. It was found that the alpha generated was statistically significant at a 95% confidence interval. The result cannot, however, be attributed to the performance of socially responsible investments in isolation. The investment holding period occurred at the same time as the overall recovery in the JSE

after the ALSI recorded its lowest index value at approximately 18 000 points in February 2009.

6.1.2 Expected return and resulting alpha analysis over a 3 year holding period

Table 4: Expected return versus actual return analysis

FUND	INCEPTION	E (R - 3 years)	Actual return	Alpha
LF SRI Fund FFW	n/a	14.7%	4.4%	-10.3%
LF SRI Fund TRW	n/a	14.0%	-1.8%	-15.9%
LF SRI Fund ERW	n/a	14.0%	-1.0%	-15.0%
LF SRI Fund SRW	n/a	14.0%	-2.2%	-16.2%
LF SRI Fund GRW	n/a	14.1%	-1.2%	-15.3%
SRI index	May-04	14.4%	3.6%	-10.8%
Community Growth Equity Fund	June-92	14.1%	7.4%	-6.7%
SIM SRI Equity Fund	January-09	n/a	n/a	n/a
Investec IAL RI Equity Fund	June-08	n/a	n/a	n/a
mean		**14.2%**	**1.3%**	**-12.9%**
standard deviation				**1.4%**
P(t<=t) two tail				**0.0%**
t Stat				***9.28***
t-critical (two tail)				**2.4**

For the investment holding period 1 January 2007 to 31 December 2009, negative alpha was generated by all the SRI Funds. It was found that the negative alpha generated was statistically significant at a 95% confidence interval. As per section 6.1.1 above, this result cannot, however, be attributed to the poor performance of socially responsible investments in isolation. The opening and closing index values of the ALSI index at 1 January 2007 and 31 December 2009 was approximately 24 915 and 27 666 respectively, resulting in an ALSI IRR of 3.55%. As a result, the poor performance of the market in

general contributed to the negative alpha achieved by the SRI funds over the investment holding period.

6.1.3 Expected return and resulting alpha analysis over a 5 year holding period

Table 5: Expected return versus actual return analysis

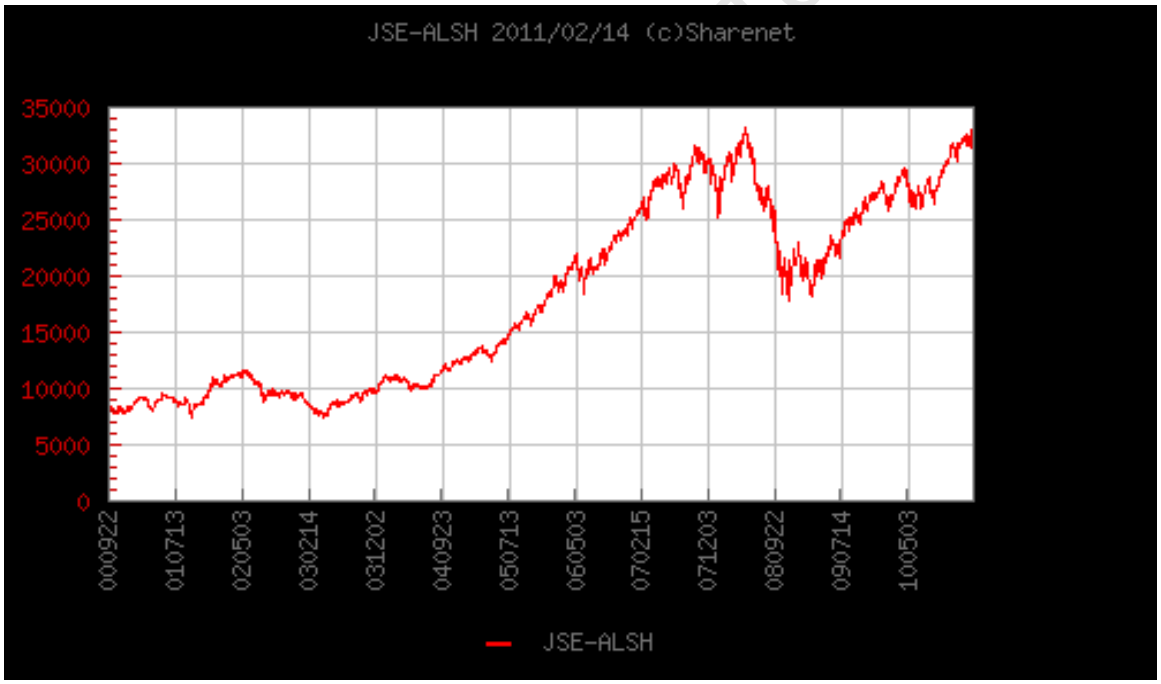
FUND	INCEPTION	E (R - 5 years)	Actual return	Alpha
LF SRI Fund FFW	n/a	11.9%	18.0%	6.1%
LF SRI Fund TRW	n/a	11.2%	11.4%	0.3%
LF SRI Fund ERW	n/a	11.2%	12.1%	0.9%
LF SRI Fund SRW	n/a	11.2%	11.4%	0.2%
LF SRI Fund GRW	n/a	11.2%	12.7%	1.5%
SRI index	May-04	11.6%	17.4%	5.85%
Community Growth Equity Fund	June-92	11.2%	17.4%	6.2%
SIM SRI Equity Fund	January-09	n/a	n/a	n/a
Investec IAL RI Equity Fund	June-08	n/a	n/a	n/a
mean		**11.4%**	**14.4%**	**3.0%**
standard deviation				**1.1%**
P(t<=t) two tail				**3.3%**
t Stat				***(2.75)***
t-critical (two tail)				**2.4**

For the investment holding period 1 January 2005 to 31 December 2009, alpha was generated by all the SRI Funds. It was found, however, that the alpha generated was also statistically significant at a 95% confidence interval.

Over all three holding periods, the alpha generated was found to be statistically significant at a 95% confidence interval. This on its own, does not provide evidence that

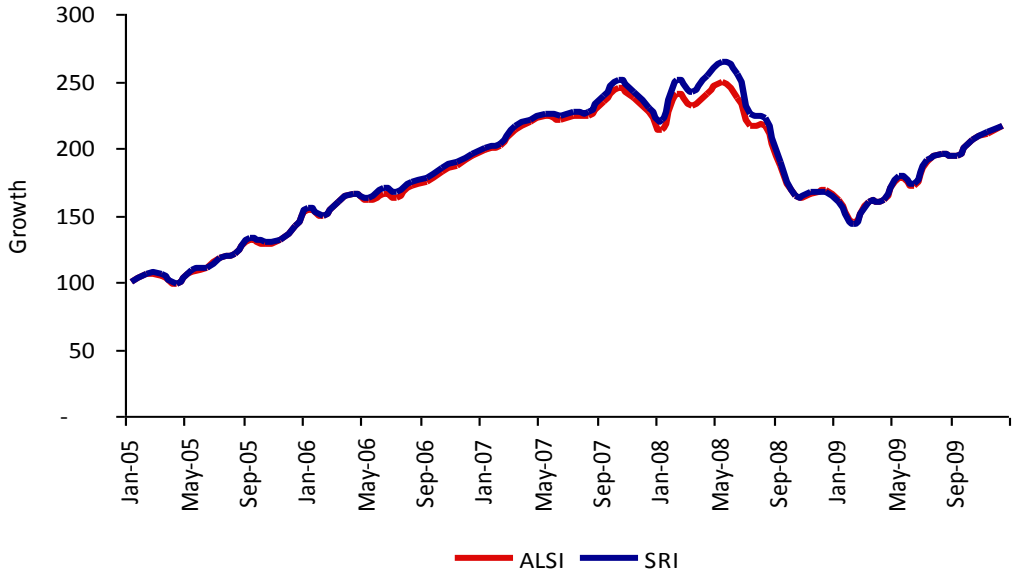
the social dynamic is not priced using conventional asset pricing theory, as is alluded to by Derwal et al (2005). The investment holding period from 1 January 2005 to 31 December 2009 is dominated by an impressive bull market and then a sudden bear market, which would result in share price over-valuations and under-valuations, regardless of whether the respective share is part of a socially responsible investment portfolio or not. The graph below depicts the movement of the ALSI index over the past 10 years.

Graph 1: ALSI index performance over 10 years



6.2 Comparison of the SRI index and the ALSI index

Graph 2: SRI performance versus ALSI performance (31 January 2005 to 31 December 2009)



Per the graph above, the performance of the SRI index has been almost identical to the ALSI index, for the period under review, barring the period between January 2008 and August 2008. This is attributable to two factors:

1. The eligible universe of companies to be included in the SRI index is those companies in the ALSI index. ALSI Top 40 companies also have a dominant presence amongst the constituent companies as presented in Table 6.
2. Both the SRI index and the ALSI index use free float market capitalisation when constructing the indices.

Table 6: Analysis of dominance of ALSI Top 40 companies in SRI index

SRI index construction*		2003	2004	2005	2007	2008
# companies being assessed		74	58	62	72	105
# constituents		51	49	58	57	61
Top 40		31	32	34	34	34
	%	60.8%	65.3%	58.6%	59.6%	55.7%
Mid-cap		17	13	17	18	23
Small cap		3	4	7	5	4

* Data obtained from JSE website which omits 2006 data

Since the launch of the SRI index, inclusion of companies to be assessed against the respective SRI criteria has been voluntary. The long-term goal for the JSE is that the assessment for inclusion will be an automatic process. At the time of writing this paper, assessment automation has not yet been achieved. As a result, an analysis between the performance of the SRI index and the ALSI index is likely to yield inconclusive results, since the constituent companies overlap, i.e., the data set is not mutually exclusive, therefore the analysis is not a comparison between wholly SRI companies and wholly non-SRI companies. Furthermore, as a result of both indices using free float market capitalization, companies which are more socially responsible are not given greater weightings than companies that are less socially responsible, i.e., the constituent weightings of both indices is quite similar, which would result in similar performance. The use of free float market capitalization in both indices, therefore justifies the construction of hypothetical SRI funds where those constituents which are more socially responsible would achieve a greater weighting.

6.3 Comparison of excess returns of SRI funds

Table 7: Comparison of excess returns generated by SRI funds

FUND	INCEPTION	1 YEAR RETURN	1 YEAR ALSI RETURN	*EXCESS*	3 YEAR RETURN	3 YEAR ALSI RETURN	*EXCESS*	5 YEAR RETURN	5 YEAR ALSI RETURN	*EXCESS*
LF SRI Fund FFW	N/A	36.7%	28.7%	*8.0%*	4.4%	3.6%	*0.9%*	18.0%	16.9%	*1.1%*
LF SRI Fund TRW	N/A	32.6%	28.7%	*3.9%*	-1.8%	3.6%	*-5.4%*	11.4%	16.9%	*-5.5%*
LF SRI Fund ERW	N/A	32.7%	28.7%	*3.9%*	-1.0%	3.6%	*-4.5%*	12.1%	16.9%	*-4.9%*
LF SRI Fund SRW	N/A	33.9%	28.7%	*5.2%*	-2.2%	3.6%	*-5.8%*	11.4%	16.9%	*-5.5%*
LF SRI Fund GRW	N/A	32.4%	28.7%	*3.7%*	-1.2%	3.6%	*-4.8%*	12.7%	16.9%	*-4.2%*
Futuregrowth SRI Equity Fund	August-04	40.5%	28.7%	*11.8%*	3.5%	3.6%	*-0.1%*	16.1%	16.9%	*-0.8%*
Community Growth Equity Fund	June-92	30.9%	28.7%	*2.2%*	7.4%	3.6%	*3.8%*	17.4%	16.9%	*0.5%*
SIM SRI Equity Fund	January-09	46.0%	28.7%	*17.3%*	n/a	n/a	n/a	n/a	n/a	n/a
Investec IAL RI Equity Fund	June-08	33.4%	28.7%	*4.7%*	n/a	n/a	n/a	n/a	n/a	n/a
mean		**38.99%**	**28.72%**	**6.73%**	**0.57%**	**3.55%**	**-2.26%**	**14.34%**	**16.93%**	**-2.76%**
standard deviation				***4.89%***			***3.78%***			***2.90%***
P(t<=t) two tail				***0.03%***			***11.20%***			***5.41%***
t Stat				***6.09***			***(1.86)***			***(2.39)***
t-critical (two tail)				***2.31***			***2.45***			***2.45***
Best performer		SIM SRI Equity Fund			Community Growth Equity Fund			LF SRI Fund FFW		

6.3.1 Excess returns over a 1 year investment holding period

For the investment holding period, 1 January 2009 to 31 December 2009, positive excess returns were generated by each of the 9 SRI funds. The best performer was SIM's SRI Equity Fund. The mean excess return was determined to be statistically significant at a 95% confidence interval. Over this same period, however, the ALSI has achieved a bit

of a recovery (refer to Graph 1), after the initial devastation brought on by the global credit crisis and subsequent recession in 2008. It would appear that share prices of the SRI fund constituents were perhaps underpriced more significantly than non-SRI shares (particularly the traditionally recession proof sin stocks as investigated by Ozkan and Xion, 2009) at the bottom of the trough and therefore exhibited greater comparative returns when the market recovered from its trough. It is believed that socially responsible investment portfolios will generally, exhibit more volatility than conventional portfolios (which would include recession proof sin stocks as part of their constituents and provide greater risk diversification benefits).

6.3.2 Excess returns over a 3 year investment holding period

For the investment holding period, 1 January 2007 to 31 December 2009, negative excess returns were generated by 5 of the 9 SRI funds. The best performer was Old Mutual's Community Growth Equity Fund. The mean negative excess return was not determined to be statistically significant at a 95% confidence interval. Over this same period, the ALSI experienced its peak at 31,841 points in May 2008 and its trough at 18 465 in February 2009. Despite the turbulent market conditions, the returns achieved by the SRI funds were statistically equal to the returns achieved by the conventional funds (the ALSI), confirming the primary hypothesis and providing similar results to the investigations undertake by Hamilton et al (1993).

6.3.3 Excess returns over a 5 year investment holding period

For the investment holding period, 1 January 2005 to 31 December 2009, negative excess returns were generated by 5 of the 9 SRI funds. The best performer was the hypothetical SRI fund weighted according to free float market capitalisation. The mean negative excess return was not determined to be statistically significant at a 95% confidence interval. Given the longer investment holding period, together with the fact that the market experienced its peak and trough during the period, the primary hypothesis of the return achieved by the SRI funds being statistically equal to the returns achieved by the conventional funds (the ALSI), was upheld.

6.4 Dividend yield analysis

Table 8: Dividend yield ("DY") analysis of hypothetical SRI funds

FUND	1 YEAR DY	1 YEAR ALSI DY	*EXCESS*	3 YEAR DY	3 YEAR ALSI DY	*EXCESS*	5 YEAR DY	5 YEAR ALSI DY	*EXCESS*
LF SRI Fund FFW	2.6%	3.7%	*-1.1%*	2.85%	2.8%	*0.0%*	3.0%	2.8%	*0.2%*
LF SRI Fund TRW	4.0%	3.7%	*0.2%*	4.38%	2.8%	*1.5%*	4.8%	2.8%	*2.0%*
LF SRI Fund ERW	3.8%	3.7%	*0.1%*	4.14%	2.8%	*1.3%*	4.5%	2.8%	*1.7%*
LF SRI Fund SRW	4.0%	3.7%	*0.3%*	4.40%	2.8%	*1.6%*	4.8%	2.8%	*2.0%*
LF SRI Fund GRW	3.9%	3.7%	*0.2%*	4.46%	2.8%	*1.6%*	4.9%	2.8%	*2.1%*
mean	**3.6%**	**3.7%**	**-0.1%**	**4.0%**	**2.8%**	**1.2%**	**4.4%**	**2.8%**	**1.6%**
standard deviation			**0.6%**			**0.7%**			**0.8%**
P(t<=t) two tail			**79.2%**			**1.6%**			**1.1%**
t Stat			***(0.28)***			***3.98***			***4.53***
t-critical (two tail)			**2.8**			**2.8**			**2.8**

6.4.1 Dividend yield analysis over a 1 year investment holding period

The difference between the dividend yield for the SRI funds and the dividend yield per the ALSI for the investment period 1 January 2009 to 31 December 2009, is not statistically significant at the 95% confidence level. Mathematically, assuming similar levels of annual dividends in either SRI or conventional funds (eg, the ALSI), this would imply that the growth in the capital appreciation was stronger in the SRI funds than the conventional funds. This is confirmed by the findings in 6.3.1, whereby the mean excess returns of the SRI funds were found to be statistically significant.

6.4.2 Dividend yield analysis over a 3 year investment holding period

The difference between the dividend yield for the SRI funds and the dividend yield per the ALSI for the investment period 1 January 2007 to 31 December 2009, has been determined to be statistically significant at the 95% confidence interval. Given that the mean excess returns for SRI funds were found to not be statistically significant, per 6.3.2, it implies that the annual dividends per share received from the SRI funds were superior to the annual dividends per share received from a conventional fund (e.g., the ALSI). Despite the turbulent market conditions, it would appear that the SRI funds were still able to be profitable enough to provide greater dividends to their shareholders than the conventional fund. Intuitively, this could also imply that the underlying constituent shares in the SRI funds are undervalued in the 3 year investment holding period.

6.4.3 Dividend yield analysis over a 5 year investment holding period

The difference between the dividend yield for the SRI funds and the dividend yield per the ALSI for the investment period 1 January 2005 to 31 December 2009, has been determined to be statistically significant at the 95% confidence interval. Given that the mean excess returns for SRI funds were found to not be statistically significant, per 6.3.3, it implies that the annual dividends per share received from the SRI funds were superior to the annual dividends per share received from a conventional fund (e.g., the ALSI). Despite the turbulent market conditions, it would appear that the SRI funds were still able to be profitable enough to provide greater dividends to their shareholders than the

conventional fund. Intuitively, this could also imply that the underlying constituent shares in the SRI funds are undervalued in the 5 year investment holding period. The intuition used over the 3 and 5 year investment holding period appears reasonable, given that equity markets have generally reported declining dividend yields over time (Correia, 2007).

Chapter 7

CONCLUSION

Does doing good, do good in a South African context? Based on the analysis undertaken, it would not immediately appear so, since the alpha and excess returns generated by the SRI funds, when compared to the market benchmark, is not statistically significant over the longer term (i.e., greater than a 1 year investment holding period). For socially responsible investors this is, however, good news. Without sacrificing on the financial dimension of social responsible investing socially responsible investors (and those aspiring to be socially responsible) can focus on the non-financial dimension without any real opportunity cost in investing in SRI funds. Furthermore, as a result of the statistically significant differences in the dividend yields between the SRI funds and the conventional funds, it would appear that the former are generally undervalued. This paper did not find evidence for the application of Merton's demand theory that the actual returns of socially responsible portfolios underperform the market.

Over all the investment holding periods, the alpha's generated by the hypothetical SRI funds were found to be statistically significant to the expected returns determined by a simplified capital asset pricing model for the respective hypothetical SRI funds. Whether the social dynamic results in mispricing of shares or whether the conventional asset pricing model is inappropriate for socially responsible investments, is not within the

scope of this paper, but it would appear that the financial returns of socially responsible investment portfolios are not worse than those of conventional portfolios.

Since the eligible universe of shares from which the SRI index is constructed, are those constituent shares in the ALSI index, the data sets are not mutually exclusive. Furthermore, the weighting method in constructing both indices is free float market capitalisation. Both these factors have resulted in almost identical performance between the SRI index and the ALSI index. It is concluded that a comparison between these indices is not likely to yield conclusive results in rejecting the primary hypothesis, but this is not because the returns of socially responsible investment portfolios are similar to the returns available from conventional investment portfolios. The SRI index as currently constructed does not reward firms exhibiting greater social responsibility with a greater weighting!

Over all the investment holding periods, except for the one year holding period, the mean excess return generated by the SRI funds was found to not be statistically significant. During periods of market recoveries (similar to the one year investment holding period investigated), the general optimism of the market, together with the fact that the constituent SRI investments would appear to have been undervalued at the bottom of the market (moreso than conventional investment portfolios), resulted in greater excess returns being generated by the SRI funds.

Over all the investment holding periods, except for the one year holding period, the difference between the mean dividend yields in respect of the SRI funds and the dividend yield in respect of the ALSI index was found to be statistically significant. Considering

that the difference in returns available to the SRI investment portfolios and the conventional investment portfolios, were found to **not** be statistically significant over the longer term, while the differences in respective dividend yields were found to be statistically significant, shows further indications that the constituent shares in the SRI investment portfolios may be underpriced – confirming a mispricing theory, is not, however, within the scope of this paper.

At a minimum, it would appear reasonable to conclude that based on the investigation undertaken, the returns available to SRI investment portfolios are similar to those available from conventional investment portfolios.

Shortcomings of the research

Socially responsible investing is considered topical at the moment and the funds that have been launched are still in their infancy, compared to conventional funds. The lack of long-term data relating to SRI funds in South Africa, is an impediment in ascertaining the long-term financial benefits of SRI, yet based on the relatively short-tem data analysed in this paper, leaves one with optimism that ascertaining the financial benefits of SRI would not be difficult to prove. The more difficult task would be to get investors to shift their mind-set when considering SRI. In 350 BC, Aristotle wrote: "*The life of money-making is one undertaken under compulsion, and wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else*". I believe this is as apt today as it was so many years ago, but when considering the human behaviour of maximisation of self-interest, whether it will be practiced is questionable.

Appendices

APPENDIX A

Table 9: List of dual listed companies obtained from JSE website - March 2010

No.	Company	No	Company
1	AFRICAN EAGLE RESOURCES PLC	39	LIBERTY INTERNATIONAL PLC
2	AFRICAN OXYGEN LIMITED	40	LONDON FINANCE AND INVEST. GRP PLC
3	AFRICAN RAINBOW MINERALS LIMITED	41	LONMIN PLC
4	ANGLO AMERICAN PLC	42	LONRHO PLC
5	ANGLO PLATINUM LIMITED	43	MARSHALL MONTEAGLE HLDGS SOC ANON
6	ANGLOGOLD ASHANTI LIMITED	44	METOREX LIMITED
7	Anooraq Resources Corporation	45	METROPOLITAN HOLDINGS LIMITED
8	AQUARIUS PLATINUM LIMITED	46	Mondi plc
9	BARLOWORLD LIMITED	47	MUTUAL & FEDERAL INSURANCE COMP LD
10	BHP BILLITON PLC	48	NEDBANK GROUP LIMITED
11	BICC CAFCA LIMITED	49	NET 1 UEPS TECHNOLOGIES INC
12	BONATLA PROPERTY HOLDINGS LIMITED	50	NICTUS BEPERK
13	BRAEMORE RESOURCES PLC	51	OANDO PLC
14	BRAIT S.A.	52	OCEANA GROUP LIMITED
15	BRC DIAMONDCORE LIMITED	53	OLD MUTUAL PLC
16	BRITISH AMERICAN TOBACCO PLC	54	PAN AFRICAN RESOURCES PLC
17	CENTRAL RAND GOLD LIMITED	55	PRETORIA PORTLAND CEMENT COMPANY LD
18	COAL OF AFRICA LIMITED	56	RANDGOLD & EXPLORATION COMPANY LD
19	CONAFEX HOLDINGS SOCIETE ANONYME	57	ROCKWELL DIAMONDS INCORPORATED
20	DATATEC LIMITED	58	SABMILLER PLC
21	DIAMONDCORP PLC	59	SANLAM LIMITED
22	DIMENSION DATA HOLDINGS PLC	60	SANTAM LIMITED
23	DRDGOLD LIMITED	61	SAPPI LIMITED
24	EASTERN PLATINUM LIMITED	62	SASOL LIMITED
25	FIRST URANIUM CORPORATION	63	SHOPRITE HOLDINGS LIMITED
26	FIRSTRAND LIMITED	64	STANDARD BANK GROUP LTD
27	GOLD FIELDS LIMITED	65	STILFONTEIN GOLD MINING COMPANY LD
28	GREAT BASIN GOLD LIMITED	66	TAWANA RESOURCES NL
29	HALOGEN HOLDINGS SOCIETE ANONYME	67	TEAL EXPLORATION AND MINING INCORP
30	HARMONY GOLD MINING COMPANY LIMITED	68	TELKOM SA LIMITED
31	HIGHVELD STEEL AND VANADIUM CORP LD	69	TONGAAT HULETT LIMITED
32	HWANGE COLLIERY COMPANY LIMITED	70	TRANS HEX GROUP LIMITED
33	IMPALA PLATINUM HOLDINGS LIMITED	71	TRUWORTHS INTERNATIONAL LIMITED
34	INVESTEC LIMITED	72	URANIUM ONE INC
35	INVESTEC PLC	73	VUKILE PROPERTY FUND LIMITED
36	IPSA GROUP PLC	74	WOOLWORTHS HOLDINGS LIMITED
37	JUBILEE PLATINUM PLC	75	ZAMBIA COPPER INVESTMENTS LIMITED
38	KIWARA PLC		

APPENDIX B

Table 10: List of qualifying companies weighted per free float market capitalisation

No.	Company	Ticker	Sector	FFW
1	AFRICAN OXYGEN LIMITED	AFX	Basic Materials	0.2%
2	AFRICAN RAINBOW MINERALS LIMITED	ARI	Basic Materials	0.6%
3	ANGLO AMERICAN PLC	AGL	Basic Materials	19.9%
4	ANGLO PLATINUM LIMITED	AMS	Basic Materials	3.4%
5	ANGLOGOLD ASHANTI LIMITED	ANG	Basic Materials	5.3%
6	BHP BILLITON PLC	BIL	Basic Materials	23.7%
7	DRDGOLD LIMITED	DRD	Basic Materials	0.1%
8	GOLD FIELDS LIMITED	GFI	Basic Materials	3.5%
9	HARMONY GOLD MINING COMPANY LIMITED	HAR	Basic Materials	1.6%
10	HIGHVELD STEEL AND VANADIUM CORP LD	HVL	Basic Materials	0.1%
11	IMPALA PLATINUM HOLDINGS LIMITED	IMP	Basic Materials	5.0%
12	LONMIN PLC	LON	Basic Materials	0.3%
13	METOREX LIMITED	MTX	Basic Materials	0.1%
14	TRANS HEX GROUP LIMITED	TSX	Basic Materials	0.0%
15	OCEANA GROUP LIMITED	OCE	Consumer Goods	0.1%
16	SHOPRITE HOLDINGS LIMITED	SHP	Consumer Services	1.6%
17	TRUWORTHS INTERNATIONAL LIMITED	TRU	Consumer Services	0.9%
18	WOOLWORTHS HOLDINGS LIMITED	WHL	Consumer Services	0.6%
19	BRAIT S.A.	BAT	Financials	0.1%
20	FIRSTRAND LIMITED	FSR	Financials	3.4%
21	INVESTEC LIMITED	INL	Financials	0.7%
22	INVESTEC PLC	INP	Financials	1.2%
23	LIBERTY INTERNATIONAL PLC	LBT	Financials	1.5%
24	MUTUAL & FEDERAL INSURANCE COMP LD	MAF	Financials	0.1%
25	NEDBANK GROUP LIMITED	NED	Financials	1.3%
26	OLD MUTUAL PLC	OML	Financials	3.6%
27	SANLAM LIMITED	SLM	Financials	2.2%
28	SANTAM LIMITED	SNT	Financials	0.2%
29	STANDARD BANK GROUP LTD	SBK	Financials	6.9%
30	TONGAAT HULETT LIMITED	TON	Food and Beverage	0.4%
31	BARLOWORLD LIMITED	BAW	Industrial Goods and Services	0.5%
32	PRETORIA PORTLAND CEMENT COMPANY LD	PPC	Industrials	0.8%
33	SASOL LIMITED	SOL	Oil & Gas	8.6%
34	DATATEC LIMITED	DTC	Technology	0.2%
35	DIMENSION DATA	DDT	Technology	0.7%
36	TELKOM SA LIMITED	TKG	Telecommunications	0.5%

APPENDIX C

Table 11: List of qualifying companies weighted per total binary rating

No.	Company	Ticker	Sector	TRW
1	AFRICAN OXYGEN LIMITED	AFX	Basic Materials	3.5%
2	AFRICAN RAINBOW MINERALS LIMITED	ARI	Basic Materials	0.8%
3	ANGLO AMERICAN PLC	AGL	Basic Materials	0.8%
4	ANGLO PLATINUM LIMITED	AMS	Basic Materials	2.0%
5	ANGLOGOLD ASHANTI LIMITED	ANG	Basic Materials	2.7%
6	BHP BILLITON PLC	BIL	Basic Materials	2.0%
7	DRDGOLD LIMITED	DRD	Basic Materials	2.0%
8	GOLD FIELDS LIMITED	GFI	Basic Materials	4.3%
9	HARMONY GOLD MINING COMPANY LIMITED	HAR	Basic Materials	3.1%
10	HIGHVELD STEEL AND VANADIUM CORP LD	HVL	Basic Materials	3.1%
11	IMPALA PLATINUM HOLDINGS LIMITED	IMP	Basic Materials	0.8%
12	LONMIN PLC	LON	Basic Materials	2.7%
13	METOREX LIMITED	MTX	Basic Materials	2.7%
14	TRANS HEX GROUP LIMITED	TSX	Basic Materials	2.4%
15	OCEANA GROUP LIMITED	OCE	Consumer Goods	3.9%
16	SHOPRITE HOLDINGS LIMITED	SHP	Consumer Services	3.5%
17	TRUWORTHS INTERNATIONAL LIMITED	TRU	Consumer Services	3.9%
18	WOOLWORTHS HOLDINGS LIMITED	WHL	Consumer Services	3.5%
19	BRAIT S.A.	BAT	Financials	2.4%
20	FIRSTRAND LIMITED	FSR	Financials	3.1%
21	INVESTEC LIMITED	INL	Financials	0.8%
22	INVESTEC PLC	INP	Financials	0.8%
23	LIBERTY INTERNATIONAL PLC	LBT	Financials	2.7%
24	MUTUAL & FEDERAL INSURANCE COMP LD	MAF	Financials	3.1%
25	NEDBANK GROUP LIMITED	NED	Financials	2.0%
26	OLD MUTUAL PLC	OML	Financials	2.7%
27	SANLAM LIMITED	SLM	Financials	3.5%
28	SANTAM LIMITED	SNT	Financials	3.5%
29	STANDARD BANK GROUP LTD	SBK	Financials	3.5%
30	TONGAAT HULETT LIMITED	TON	Food and Beverage	3.5%
31	BARLOWORLD LIMITED	BAW	Industrial Goods and Services	4.7%
32	PRETORIA PORTLAND CEMENT COMPANY LD	PPC	Industrials	3.9%
33	SASOL LIMITED	SOL	Oil & Gas	2.4%
34	DATATEC LIMITED	DTC	Technology	2.4%
35	DIMENSION DATA HOLDINGS PLC	DDT	Technology	3.1%
36	TELKOM SA LIMITED	TKG	Telecommunications	3.9%

APPENDIX D

Table 12: List of qualifying companies weighted per environmental binary rating

No.	Company	Ticker	Sector	ERW
1	AFRICAN OXYGEN LIMITED	AFX	Basic Materials	1.7%
2	ANGLOGOLD ASHANTI LIMITED	ANG	Basic Materials	3.4%
3	BHP BILLITON PLC	BIL	Basic Materials	3.4%
4	DRDGOLD LIMITED	DRD	Basic Materials	3.4%
5	GOLD FIELDS LIMITED	GFI	Basic Materials	5.1%
6	HARMONY GOLD MINING COMPANY LIMITED	HAR	Basic Materials	1.7%
7	HIGHVELD STEEL AND VANADIUM CORP LD	HVL	Basic Materials	3.4%
8	IMPALA PLATINUM HOLDINGS LIMITED	IMP	Basic Materials	1.7%
9	LONMIN PLC	LON	Basic Materials	3.4%
10	METOREX LIMITED	MTX	Basic Materials	3.4%
11	OCEANA GROUP LIMITED	OCE	Consumer Goods	5.1%
12	SHOPRITE HOLDINGS LIMITED	SHP	Consumer Services	5.1%
13	TRUWORTHS INTERNATIONAL LIMITED	TRU	Consumer Services	5.1%
14	WOOLWORTHS HOLDINGS LIMITED	WHL	Consumer Services	3.4%
15	FIRSTRAND LIMITED	FSR	Financials	3.4%
16	INVESTEC LIMITED	INL	Financials	0.0%
17	INVESTEC PLC	INP	Financials	0.0%
18	LIBERTY INTERNATIONAL PLC	LBT	Financials	5.1%
19	MUTUAL & FEDERAL INSURANCE COMP LD	MAF	Financials	1.7%
20	OLD MUTUAL PLC	OML	Financials	3.4%
21	SANLAM LIMITED	SLM	Financials	1.7%
22	SANTAM LIMITED	SNT	Financials	1.7%
23	STANDARD BANK GROUP LTD	SBK	Financials	3.4%
24	TONGAAT HULETT LIMITED	TON	Food and Beverage	3.4%
25	BARLOWORLD LIMITED	BAW	Industrial Goods and Services	6.8%
26	PRETORIA PORTLAND CEMENT COMPANY LD	PPC	Industrials	3.4%
27	SASOL LIMITED	SOL	Oil & Gas	3.4%
28	DATATEC LIMITED	DTC	Technology	5.1%
29	DIMENSION DATA HOLDINGS PLC	DDT	Technology	5.1%
30	TELKOM SA LIMITED	TKG	Telecommunications	3.4%

APPENDIX E

Table 13: List of qualifying companies weighted per social binary rating

No.	Company	Ticker	Sector	ERW
1	AFRICAN OXYGEN LIMITED	AFX	Basic Materials	3.8%
2	AFRICAN RAINBOW MINERALS LIMITED	ARI	Basic Materials	2.3%
3	ANGLO AMERICAN PLC	AGL	Basic Materials	2.3%
4	ANGLO PLATINUM LIMITED	AMS	Basic Materials	2.3%
5	ANGLOGOLD ASHANTI LIMITED	ANG	Basic Materials	3.0%
6	BHP BILLITON PLC	BIL	Basic Materials	1.5%
7	DRDGOLD LIMITED	DRD	Basic Materials	1.5%
8	GOLD FIELDS LIMITED	GFI	Basic Materials	3.8%
9	HARMONY GOLD MINING COMPANY LIMITED	HAR	Basic Materials	3.8%
10	HIGHVELD STEEL AND VANADIUM CORP LD	HVL	Basic Materials	3.0%
11	LONMIN PLC	LON	Basic Materials	2.3%
12	METOREX LIMITED	MTX	Basic Materials	2.3%
13	TRANS HEX GROUP LIMITED	TSX	Basic Materials	3.8%
14	OCEANA GROUP LIMITED	OCE	Consumer Goods	3.8%
15	SHOPRITE HOLDINGS LIMITED	SHP	Consumer Services	2.3%
16	TRUWORTHS INTERNATIONAL LIMITED	TRU	Consumer Services	3.8%
17	WOOLWORTHS HOLDINGS LIMITED	WHL	Consumer Services	3.8%
18	BRAIT S.A.	BAT	Financials	3.8%
19	FIRSTRAND LIMITED	FSR	Financials	2.3%
20	INVESTEC LIMITED	INL	Financials	1.5%
21	INVESTEC PLC	INP	Financials	1.5%
22	LIBERTY INTERNATIONAL PLC	LBT	Financials	1.5%
23	MUTUAL & FEDERAL INSURANCE COMP LD	MAF	Financials	3.8%
24	NEDBANK GROUP LIMITED	NED	Financials	1.5%
25	OLD MUTUAL PLC	OML	Financials	3.0%
26	SANLAM LIMITED	SLM	Financials	3.8%
27	SANTAM LIMITED	SNT	Financials	3.8%
28	STANDARD BANK GROUP LTD	SBK	Financials	3.8%
29	TONGAAT HULETT LIMITED	TON	Food and Beverage	3.8%
30	BARLOWORLD LIMITED	BAW	Industrial Goods and Services	3.8%
31	PRETORIA PORTLAND CEMENT COMPANY LD	PPC	Industrials	3.8%
32	SASOL LIMITED	SOL	Oil & Gas	2.3%
33	DATATEC LIMITED	DTC	Technology	1.5%
34	DIMENSION DATA HOLDINGS PLC	DDT	Technology	2.3%
35	TELKOM SA LIMITED	TKG	Telecommunications	3.8%

APPENDIX F

Table 14: List of qualifying companies weighted per governance binary rating

No.	Company	Ticker	Sector	ERW
1	AFRICAN OXYGEN LIMITED	AFX	Basic Materials	4.3%
2	AFRICAN RAINBOW MINERALS LIMITED	ARI	Basic Materials	1.4%
3	ANGLO AMERICAN PLC	AGL	Basic Materials	1.4%
4	ANGLO PLATINUM LIMITED	AMS	Basic Materials	4.3%
5	ANGLOGOLD ASHANTI LIMITED	ANG	Basic Materials	1.4%
6	BHP BILLITON PLC	BIL	Basic Materials	1.4%
7	DRDGOLD LIMITED	DRD	Basic Materials	1.4%
8	GOLD FIELDS LIMITED	GFI	Basic Materials	4.3%
9	HARMONY GOLD MINING COMPANY LIMITED	HAR	Basic Materials	2.9%
10	HIGHVELD STEEL AND VANADIUM CORP LD	HVL	Basic Materials	2.9%
11	IMPALA PLATINUM HOLDINGS LIMITED	IMP	Basic Materials	2.9%
12	LONMIN PLC	LON	Basic Materials	2.9%
13	METOREX LIMITED	MTX	Basic Materials	2.9%
14	TRANS HEX GROUP LIMITED	TSX	Basic Materials	1.4%
15	OCEANA GROUP LIMITED	OCE	Consumer Goods	2.9%
16	SHOPRITE HOLDINGS LIMITED	SHP	Consumer Services	4.3%
17	TRUWORTHS INTERNATIONAL LIMITED	TRU	Consumer Services	2.9%
18	WOOLWORTHS HOLDINGS LIMITED	WHL	Consumer Services	2.9%
19	BRAIT S.A.	BAT	Financials	1.4%
20	FIRSTRAND LIMITED	FSR	Financials	4.3%
21	LIBERTY INTERNATIONAL PLC	LBT	Financials	2.9%
22	MUTUAL & FEDERAL INSURANCE COMP LD	MAF	Financials	2.9%
23	NEDBANK GROUP LIMITED	NED	Financials	4.3%
24	OLD MUTUAL PLC	OML	Financials	1.4%
25	SANLAM LIMITED	SLM	Financials	4.3%
26	SANTAM LIMITED	SNT	Financials	4.3%
27	STANDARD BANK GROUP LTD	SBK	Financials	2.9%
28	TONGAAT HULETT LIMITED	TON	Food and Beverage	2.9%
29	BARLOWORLD LIMITED	BAW	Industrial Goods and Services	4.3%
30	PRETORIA PORTLAND CEMENT COMPANY LD	PPC	Industrials	4.3%
31	SASOL LIMITED	SOL	Oil & Gas	1.4%
32	DATATEC LIMITED	DTC	Technology	1.4%
33	DIMENSION DATA HOLDINGS PLC	DDT	Technology	2.9%
34	TELKOM SA LIMITED	TKG	Telecommunications	4.3%

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