



An analysis of sustainable reporting rating levels as an indicator of financial performance for JSE listed companies

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Abstract

The purpose of sustainability reports is to represent the progress of a company's sustainability effort and status to stakeholders. There is a need for stakeholders to benchmark sustainability performance of companies. The objective of this research was to find evidence that the GRI Application Level used in the ranking GRI compliant sustainability reports, is an indicator of financial performance for companies trading on the JSE in South Africa.

The results will show that there is no evidence to show that the GRI Applications Level is an indicator of financial performance. The consequence of this evidence is that the lack of adequate benchmark standards can de-motivate companies to strive for higher sustainability performance.

Keywords

Sustainability reporting, benchmarking, GRI guideline, shareholder return, corporate governance

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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TABLE OF CONTENTS

Chapter 1: Introduction	1
1.1 Introduction	1
1.2 Research Problem	2
1.3 Research Objectives	3
1.4 Research Purpose	3
Chapter 2: Literature Review	4
2.1 Introduction	4
2.2 Sustainability guidelines and standards	4
2.3 Sustainability and financial performance	6
2.4 Sustainability Reporting in the South Africa Context	7
2.5 The King Code of Corporate Governance	8
2.6 JSE Reporting Requirements	8
2.7 Global Reporting Initiative	9
2.8 The relationship between King III, GRI and SRI	12
2.9 Benchmarking of company performance	13
Chapter 3: Research Hypothesis	14
3.1 Introduction	14
3.2 Hypothesis One	14
3.3 Hypothesis Two	14
3.4 Hypothesis Three	14
3.5 Hypothesis Four	15
3.6 Hypothesis Five	15
Chapter 4: Research Methodology	16
4.1 Scope	16
4.2 Research Design	16
4.2.1 Sustainability Application Rating	16
4.2.2 Corporate Financial Performance	17
4.3 Population	18

4.4	Sampling	19
4.4.1	Limitations of Sample	19
4.5	Data Collection and Analysis	19
Chapter 5: Results		21
5.1	Description of the sample data	21
5.2	Data analysis	23
5.2.1	Hypothesis one	24
5.2.2	Hypothesis two.....	28
5.2.3	Hypothesis Three	33
5.2.4	Hypothesis Four	36
5.2.5	Hypothesis Five	39
Chapter 6: Discussion of research results		42
6.1	Introduction	42
6.2	Discussion of hypothesis one	44
6.3	Discussion of hypothesis two	46
6.4	Discussion of hypothesis three	49
6.5	Discussion of hypothesis four.....	50
6.6	Discussion of hypothesis five	52
Chapter 7: Conclusion and recommendations		55
7.1	Introduction	55
7.2	Findings	55
7.3	Limitations of the research	56
7.4	Recommendations	56
7.5	Conclusion	57
List of References		58

LIST OF TABLES

Table 1 GRI Application Level Matrix	11
Table 2 SAR Calculation Matrix.....	17
Table 3 The GRI Category	17
Table 4 GRI Sectors in South Africa.....	22
Table 5 Financial services sector GRI high score indicator results	25
Table 6 Mining sector GRI high score indicator results.....	26
Table 7 Financial services GRI low score indicator results	29
Table 8 Mining sector GRI low score indicator results	31
Table 9 All sector GRI high score indicator results	34
Table 10 All sector GRI low score indicator results.....	37
Table 11 Type GRI versus Non-GRI indicator results	40

LIST OF FIGURES

Figure 1 Integrated Report Frameworks	12
Figure 2 Financial services sector GRI high score indicators box plot	25
Figure 3 Financial services sector GRI high score indicators means	25
Figure 4 Mining sector GRI high score indicators box plot.....	26
Figure 5 Mining sector GRI high score indicators means.....	27
Figure 6 Financial services sector GRI low score indicators box plot.....	29
Figure 7 Financial services sector GRI low score indicators means	29
Figure 8 Mining sector GRI low score indicators box plot	31
Figure 9 Mining sector GRI low score indicators means	32
Figure 10 All sector GRI high score indicators box plot	34
Figure 11 All sector GRI high score indicators means	34
Figure 12 All sector GRI low score indicators box plot.....	37
Figure 13 All sector GRI low score indicators means.....	37
Figure 14 Type GRI versus Non-GRI indicators box plot.....	40
Figure 15 Type GRI versus Non-GRI indicators means.....	40

CHAPTER 1: INTRODUCTION

1.1 Introduction

In the past decade, stakeholders required organizations to increase their sustainability development and to provide quality integrated reports to reflect the progress of their programmes. These stakeholders consist of the government, shareholders, stock exchange boards, industry organisations, environmental activist and the public. Companies have an obligation to show their willingness to partake in social and environmental issues while continuing to increase economic performance through good corporate governance. The three dimensions of sustainability reporting, namely; social, environmental and economic dimensions are commonly known as the Triple Bottom Line [TBL], a framework created by John Elkington (2004) in an effort to create a tool for organisations to actively change the culture of companies to manage sustainable obligations. In the past organisations focused on the financial statements to report the financial health of the organisation to stakeholders. These financial statements have been refined frequently to provide comprehensive reports that conform to certain accounting standards.

Finding a standard format or unit of measure to evaluate the progress of social and environmental activities are very complex and therefore the focus has changed to guidelines and the compliance thereof.

In South Africa, there are three important sustainability guidelines for companies trading on the Johannesburg Stock Exchange [JSE]. The first guideline is the King Code of Governance III [King III], which focuses on good governance for companies (IoDSA, 2009). The second guideline is the JSE Social Responsibility [SRI] Index, which focusses on a company's impact on the environment; commitment to social sustainability, and governance and related sustainability concerns (JSE, 2011). The third guideline is the Global Reporting Initiative [GRI], an international recognised framework for reporting on sustainability of a company (GRI, 2011). The GRI guideline has a greater emphasis on the environment, but also reference governance, economic and social sustainability. All of these guidelines/codes are overlapping, supportive and complementary to each other. Compliance to these guidelines is achieved through a process of different levels of disclosure. This disclosure methodology encourages companies to accept the guidelines and to disclose information according to their current capability and sustainability status.

1.2 Research Problem

The GRI guideline states: “Sustainability reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organisational performance” (GRI, 2011) and further that the purpose, among other is to be able to do benchmarking and comparing of the results. To stakeholders, benchmarking and comparison is very important, but depending on the type of stakeholders, different metrics are used. Internally management use the results to identify gaps and make strategic decisions to ensure the organisations sustainability in context of financial gain. Government and regulatory officials will look at the detail of compliance. Investors focus mainly on short, medium and long-term shareholders return. Financial annual reports are the core resource for decision making about the potential growth of a company. A drawback is the historical nature of the financial statements, which reflects a past point in time. Financial statements cannot reveal if an organisation is sound, well managed and adapting to the economic climate changes. Sustainable disclosures were designed to cover the gap of assurance that the company will grow beyond future crises.

Investors use reliable data to make decisions, but it is very difficult to find measurements within the sustainable reports that are easy to interpret and can be used to compare companies. Without standardised and widely applicable measurements contained in sustainable reports, these reports add no value to the decision making process of potential investors.

In the preparation of the sustainability reports, organisations have to use limited resources to compile and verify the reports. Assurance of the disclosure is done by auditing companies, which adds to the cost of the report. This increase the overhead costs of the actual implementation of the minimum requirements and additional initiatives. Apart from regulatory compliance, sustainable reporting without proper benchmarking fails to motivate organisations to spend more on initiatives and to provide continually improved sustainability reports.

The GRI framework has a classification process called the Application Level. The Application Level is derived from two aspects of the report, namely, prescribed minimum disclosures per section and how the report is verified. Additional indications are displayed for third party assurances. The GRI framework states that the “reporting criteria found in each level reflects an increasing application or coverage of the GRI Reporting Framework” (GRI, 2011). An increased application level is the result of an increase in

effort, resources and sustainability initiatives. An organisation can achieve this only through a conscious decision from management to spend the resources on coordinated activities. Management will agree to such an initiative if they believe the results will be captured by the rating system and recognised by stakeholders.

The King III Code confirms that “good governance is ... about effective leadership” resulting in a well-managed, ethical and responsible organisation where “sustainability is the primary moral and economic imperative” (IoDSA, 2009). The result of effective leadership is reflected in the way sustainability is viewed and reported on. The reverse of this argument is that the sustainability reports should reflect the effectiveness of leadership to manage the organisation towards higher financial performance.

1.3 Research Objectives

This study seeks empirical evidence to support the argument that sustainability disclosure classification is a proxy for the financial performance of a company. The study will provide clarity to institutional investors if the classification of the sustainability reports can be used as an indication of potential financial performance of an organisation. For organisations, it will confirm the recognition of higher classification and organisational effort to reach it.

1.4 Research Purpose

The purpose of this research is to determine the value of the classification of sustainability reports and whether this classification is adequate to be used as a benchmarking indicator of the potential financial performance of a company.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

International awareness of environmental issues was raised at the 1972 UN Stockholm Conference on the Human Environment. This was the first international conference on human interaction with its environment. Of particular importance was the issues raised on “environmental degradation and transboundary pollution” (UNCED, 2006). The principles contained in the declaration of the conference aimed to “inspire and guide” towards an sustainable environment (UNEP, 1972). This declaration consisted of common economic, social, environmental and governance principles addressing the responsibility and accountability of countries to implement environmental; social and human rights; and economic development policies in the protection of the people, environment and economic activities. The principles defined the role of the state as an enabler to ensure that organisations protect and improve the environment (1972).

The next event of importance was the Earth Summit held in Rio de Janeiro in 1992, bringing together 179 countries “in an effort to reconcile the impact of human-socio-economic activities on the environment” (UNCED, 2006). The biggest result of this summit was the creation of Agenda 21, the comprehensive plan of sustainability actions, which became the reference plan for all successive Earth Summits, but also influencing governmental sustainable policies and committed activities. Agenda 21 was further developed at the next Earth Summit in 1997, which led to the creation of the Kyoto Protocol, - an international agreement to decrease greenhouses gasses. Since 1997, 191 countries signed commitments to reduce greenhouse gasses by a certain timeline. This commitment forced governments to implement programmes that would change the behaviour of major groups and organisations to comply to the Kyoto Protocol and Agenda 21 adapted principles. At first, sustainability disclosure was voluntary, but governments had to introduce regulations to monitor the progress and adaption of the sustainability principles by organisations.

2.2 Sustainability guidelines and standards

The structure for financial annual reports has a rich history of development through the ages into an acceptable format and standards. In contrast to this, sustainability reporting is still in the early stages of development and general acceptance. Before sustainability existed, environmentalist focused on the worst pollution offenders including coal industries, mining and quarrying, pesticides and water resources in the 1960's

(Elkington, 1994). By the 1970's the list of industries targeted was four times longer and more practises came under attack. The first industrial response to the pressure was environmental impact assessments, early policy statements and legal advisors, according to Elkington (1994). Through the 1980's the HSE policies developed further but corporate environmental accounting and reporting only materialised in the 1990's. The early adopters of environmental disclosure were companies wanting to portray a clean image to the public.

From the beginning of non-profit reporting, stakeholders struggled to formulate the content structure and measurement standards of the report. Guidelines and standards were developed around core environmental issues for each period, but acceptance of a guideline depended on the organisation that created it and how governments, NGOs and international organisations it was supported it. Most of the guidelines have improved over time on the clarity of the requirements, the way it is structured or indexed, the scope and options covered by the guidelines and by the introduction of measurement criteria.

Some of the globally accepted sustainability guidelines and standards are:

- **CDP:** The Carbon Disclosure Project encourages companies to disclose their greenhouse gas emissions, climate change risks and water strategies (CDP, 2012).
- **IFC:** The International Finance Corporation is part of the World Bank Group and prescribe performance standards for investment and advisory clients whose projects goes through the IFC's initial credit review process (IFC, 2012).
- **OECD:** The Organisation for Economic Co-Operation and Development provides a guideline for multinational enterprises (OECD, 2008).
- **UNGC:** The United Nations Global Compact consists of two human rights principles, four labour principles, three environmental principles and one anti-corruption principle (UNGC, 2012).
- **ISO26000:** The International Standard Guidance on Social Responsibility, provides harmonised and globally relevant guidance for private and public sector organisations of all types (ISO, 2010).

- **AA1000SES:** The AA1000 Stakeholder Engagement Standard from AccountAbility provides a basis for designing, implementing, evaluating and assuring the quality of stakeholder engagement (AA1000SES, 2011).
- **GRI:** The Global Reporting Initiative provides all companies and organisations with a comprehensive sustainability reporting framework (GRI, 2011).

2.3 Sustainability and financial performance

The participation of companies to commit to sustainability initiatives and due diligence in the disclosure of these initiatives, depends on more than just a moral and ethical culture, but in the realisation of the long-term business case of economic performance based in a sustainability strategy.

Klassen & McLaughlin (1996) found a good relationship between environmental performance and the firm financial performance. They demonstrated through empirical evidence that “Significant abnormal stock returns were documented following positive environmental events” (p. 1212).

Hunt, Grinnel and Wilson (2004) concluded that “measuring the relationship between financial performance and some “proxy” for environmental performance, seem to offer the most concrete empirical evidence of a positive relationship between a firm’s environmental and financial performance” (p. 33). Al-Tuwaijri, Christensen and Hughes (2004) developed an empirical model to investigate the endogenous relationship between economic performance, environmental performance and environmental disclosure. They concluded that “environmental performance and economic profitability go hand-in-hand” and “is also consistent with the view that economic performance and environmental performance are both related to the quality of management” (p. 467).

Clarkson, Li, Richardson, and Vasvari (2008) revisited the relation between environmental performance and environmental disclosure by “testing economics based theories of voluntary disclosure” and using “two reliable environmental performance measures using actual toxic emissions and waste management data” (p. 30) to validate the reports. They found “a positive association between environmental performances and the level of discretionary disclosures in environmental and social reports or related web disclosures” (p. 30). The disclosures used in this research were taken from the annual GRI reports based on the GRI Guidelines 2.

Abdo and Fisher's (2007) researched the "impact of reported corporate governance disclosure on the financial performance of companies listed on the JSE" and found that "better governed firms will experience above average returns and the converse for poorly governed firms". Further findings were that "South African companies with high levels of corporate governance disclosure will achieve higher firm valuations than companies with low levels of corporate governance" (p. 55). Abdo et al (2007) used data from King II reports required from all South African companies listed on the JSE (IoDSA, 2009) and the financial data from the JSE to compile the report. The report revealed the highest correlation between sustainability disclosure and financial return (Abdo et al, 2007). An important conclusion of the study is "that investors place a premium on South African companies with good governance" (p. 54).

2.4 Sustainability Reporting in the South Africa Context

Since 1997 when South Africa signed up for the Kyoto Protocol, influential stakeholders in the South African economy introduced incremental requirements and raised expectations of sustainability performances from companies and other organisations in South Africa. The South African Government working through the Department of Environmental Affairs and in co-operation with the DTI, introduced the National Framework for Sustainable Development, a guideline with the vision a for sustainability development path.

Parliament approved the Companies Act 71 of 2008, which introduced substantial changes for social, environmental and corporate governance requirements (South Africa Government, 2009). Due to the additional mandatory requirements of the Companies Act and the changes in international governance trends, the King Committee, sponsored by the Institute of Directors in Southern Africa released the King III Code for Corporate Governance in 2009 (IoDSA, 2009). The JSE has subsequently increased the reporting requirements for listed companies in line with the King III Code and added the [SRI] Index as a guideline on the best practices for social investment and what investors are looking for (JSE, 2011). One of the recommendations of King III is the introduction of an integrated report instead of a separate financial and sustainability reports. The GRI G3 and G3.1 have been widely used by listed and non-listed companies as a framework to comply to the Companies Act, King III Code and JSE requirements.

2.5 The King Code of Corporate Governance

The King Committee on Corporate Governance, formed in 1992, released the King I Report in 1994 and established standards of conducts for boards and directors of organisations in relation to the society in which they operate.

The King II report was released in 2002 and was applicable to listed companies, financial institutions and public sector enterprises. The JSE required listed companies to supply together with their annual financial reports, a narrative on their compliance or explain their non-compliance to the King II (IoDSA, 2009).

In 2009 the King Code of Governance [King III] was released with additional mandatory sections in accordance with the Companies Act of 2008. The Code determines the responsibility of the board to appoint, instruct and enable the organisation to address issues through strategic planning and execution. In principle, the Code requires sustainability disclosures to be incorporated with the financial reports into a single integrated annual report with additional comments and disclosures from the board including negative and positive impact of the operation on society and the natural environment (IoDSA, 2009).

In the disclosure of the compliance to the King III Code, the organisations have the option to comply or to explain why they don't comply and what is planned to rectify the situation. This methodology allows organisations of different sizes and maturity to report on the current status with the opportunity to improve in the future. The King Code covers a very broad basis and intent to be general and applicable to all organisations. The structure of the disclosures provides valuable information to institutional investors and other stakeholders.

2.6 JSE Reporting Requirements

With the introduction of King II Code, the JSE required all companies listed on the main board to provide an annual sustainability report indicating the compliance to the Code. The JSE compiled the [SRI] Index to assist listed companies with compliance to the King Code and Companies Act.. The SRI serves as supplementary guidelines to the King Code with a focus on specific criteria to be met under environmental, social, governance and sustainability indicators. Critical issues such as HIV/AIDS and BEE are measured separately and are unique to the SRI Index.

Under the environmental indicator, industries are classified as high, medium and low, based on the impact their industry has on the environment. Each of these classifications has different disclosure requirements. The information contained in submitted reports are researched and evaluated by Ethical Investment Research Services [EIRIS]. The SRI's annual report contains the list of qualifiers and best performers.

2.7 Global Reporting Initiative

The Global Reporting Initiative [GRI] is a network-based organisation that pioneered the world's most widely used sustainability reporting framework (SAICA, 2012). The reporting framework sets out the principles and performance indicators that organisations can use to measure and report on their economic, environmental, and social performance (GRI, 2011). The GRI started when "Dr. Allen White, Vice President and Senior Fellow at Tellus, pioneered a framework for environmental reporting as advisor to CERES in the early 1990s, with the aim of creating an accountability mechanism to ensure companies followed the CERES Principles for responsible environmental conduct" (Miles-Hill, 2007).

The latest GRI framework called Sustainability Reporting Guidelines 3.1 [G3.1] was release in 2011 with some additional core reporting guidelines added to the Labour, management and society sections compared to G3. The GRI guidelines consist of the following dimensions, with core and additional indicators:

EC – Economic: Consist of seven core and two additional indicators related to economic performance, market presence and indirect economic impacts.

EN – Environmental: Consist of 17 core and 13 additional indicators including aspects of materials; energy, water, biodiversity, emissions, effluent and wastes, product and services, compliance and transport.

Social:

LA - Labour Practices and Decent Work: Consist of ten core and five additional indicators related to, employment, labour/management relationships, occupational health and safety, training and education, diversity and equal opportunity.

HR - Human Rights: Consists of nine core and two additional indicators related to, investment and procurement practices, non-discrimination, freedom of

association and collective bargaining, child labour, forced and compulsory labour; security practice, indigenous rights, assessments and remediation of grievances.

SO –Society: Consists of eight core and two additional indicators related to, local communities, corruption, public policies, anti-competitive behaviours, compliance to laws and regulations.

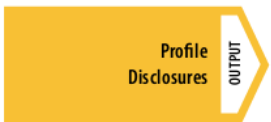


PR - Product Responsibility: Consist of four core and five additional indicators related to, customer health & safety, product and service labelling, market communication, privacy, and compliance to regulations.

Source (GRI, 2011)

Additional to the general framework described above, certain industries can disclose on Sector Supplement Performance Indicators that is applicable to the unique environment of the industry.

The GRI Application Level is a matrix system of measurement and qualification used to rate a report. The levels reflect criteria covered by the application of the GRI framework, starting with level C for beginners and level A for the highest application of the framework. Assurance of the declaration of the application level is indicated with a “+” sign for GRI- or third-party checked reports. Table 1 below show the high-level criteria for the application level.

Table 1 GRI Application Level Matrix

Report Application Level		C	C+	B	B+	A	A+
Standard Disclosures	 Profile Disclosures	Report on: 1.1 2.1 - 2.10 3.1 - 3.8, 3.10 - 3.12 4.1 - 4.4, 4.14 - 4.15	Report Externally Assured	Report on all criteria listed for Level C plus: 1.2 3.9, 3.13 4.5 - 4.13, 4.16 - 4.17	Report Externally Assured	Same as requirement for Level B	
	 Disclosures on Management Approach	Not Required		Management Approach Disclosures for each Indicator Category		Management Approach disclosed for each Indicator Category	
	 Performance Indicators & Sector Supplement Performance Indicators	Report fully on a minimum of any 10 Performance Indicators, including at least one from each of: social, economic, and environment.**		Report fully on a minimum of any 20 Performance Indicators, at least one from each of: economic, environment, human rights, labor, society, product responsibility.***		Respond on each core and Sector Supplement* indicator with due regard to the materiality Principle by either: a) reporting on the indicator or b) explaining the reason for its omission.	
		* Sector supplement in final version		** Performance Indicators may be selected from any finalized Sector Supplement, but 7 of the 10 must be from the original GRI Guidelines		*** Performance Indicators may be selected from any finalized Sector Supplement, but 14 of the 20 must be from the original GRI Guidelines	

Taken from the (GRI, 2011)

According to the GRI framework (GRI, 2011), the GRI application level system aims to provide:

- Report readers with clarity about the extent to which the GRI Guidelines and other Reporting Framework elements have been applied in the preparation of a report; and
- Report preparers with a vision or path for incrementally expanding application of the GRI Reporting Framework over time.

The GRI provides an online index of companies who submitted sustainability reports. The list includes all reports that conform to any of the applications levels. In addition, since 2011 the GRI index also includes companies who submitted non-GRI reports. In most instances the public can download the actual reports. The index provides additional information about each sustainability report according to the guideline it conforms to and additional information declared by the company. The G3.1 reports provide the most detail including the Application Level, size, industry, report type, the assurance types, whether it is an integrated report or standalone and whether a sector supplement is included. The index also reference additional standards or guidelines that the report complies with,

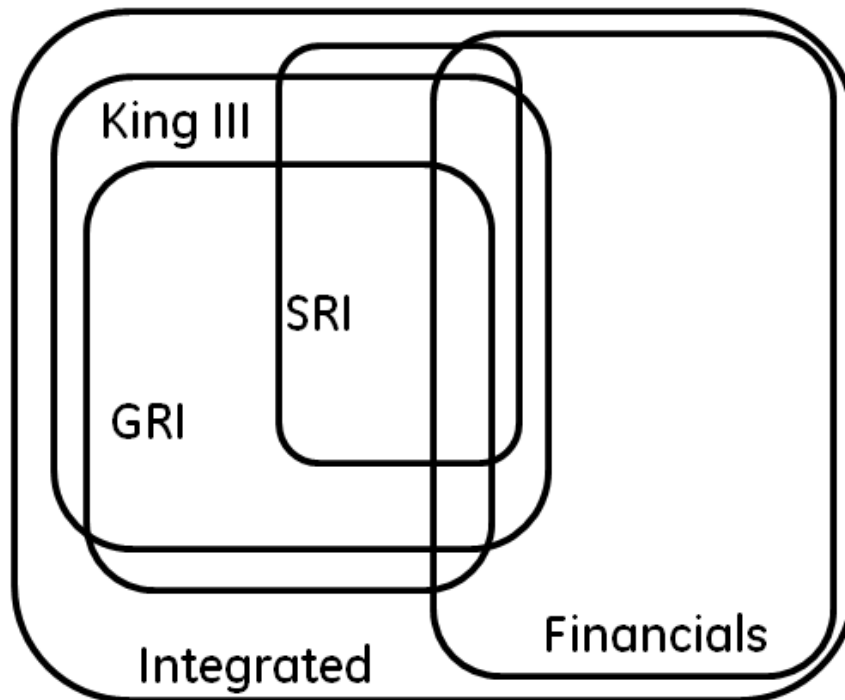
including CDP, IFC OECD, UNGC and ISO 26000. This index provides easy access to core information about a company’s sustainability reporting.

2.8 The relationship between King III, GRI and SRI

King III, GRI and SRI are the core sustainability reporting tools for JSE listed companies. A statement of compliance to the King III Code is mandatory. A report on the SRI is recommended and mandatory for large companies and the top 40 companies on the JSE. To use the GRI guideline is voluntary, but companies extract value from the structured framework’s integration and support with the King III disclosures. Figure 1 is a diagram of the scope and overlapping fields of the sustainability frameworks in an integrated report.

An integrated report is a new trend in financial reporting with the purpose to include all financial and non-financial information into one document. The integrated report is intended to be a comprehensive information tool for stakeholders about the historical financials, current sustainability initiative and future growth prospects and vision. King III covers most of the non-financials whereby support and additional scope is provided by the SRI and GRI frameworks.

Figure 1 Integrated Report Frameworks



2.9 Benchmarking of company performance

Investors and other stakeholders are increasingly concerned about the risk of environmental, social and governance matters affecting the investment in a company. The need for benchmarking the different companies' sustainability drive goes beyond the confirmation of the annual submission of sustainability report. For benchmarking purposes, more granular classification of sustainability reports are needed with external assurances according to available standards.

Al-Tuwaijri et al (2004) confirmed the relationship between "good environmental performance and more extensive quantifiable disclosure (2004, p. 466), but according to Brown et al (2009) the "proliferation of many voluntary reporting systems also allowed reporters to choose those that put them in the best light" (p. 10). The voluntary nature of most of the sustainability reports provided easy routes for organisations to be seen as "green", but the continuous development of global acceptable reporting standards and assurance processes aim to address this issue.

In the South African context, the King III Code sets the scope for sustainability disclosures and the SRI and GRI as supporting guideline tools. There is no overall rating or classification for King III and the quality of the response is determined by accounting for compliant versus explained indicators.

With the SRI, an external data provider qualifies the reports through research, and then report annually on the reports that have passed all the criteria. An additional list for best performers in each category of environmental impact is also presented. No comparable rating is given to benchmark the different companies against each other. The GRI Content Index provides a certain level of rating with the posting of the Application Level, reflecting the coverage of the application and external assurances.

It must be noted that not all companies make use of the GRI framework to submit and comply to King III and/or the SRI requirements.

In this research, the GRI Application Level is used as an indicator of sustainability report rating and content.

CHAPTER 3: RESEARCH HYPOTHESIS

3.1 Introduction

Chapter three details the questions derived from the research problem and literature review. A hypothesis is formulated for each question, which is resolved through statistical process in chapter 5.

The hypotheses recognise the different levels of reporting disclosures of environmental sustainability as per the voluntary reporting guidelines of the GRI. The comparison is against the sector average to take into account the different macro-and-microeconomic forces at play in each of the sectors.

3.2 Hypothesis One

Companies with high Application Level ratings for the GRI reference sustainability reports achieve higher than the sector average financial returns for the shareholders.

H_0 : There is no significant difference between the financial indicator averages of companies with a high Application Level score and companies in the same sector.

H_A : The financial indicator averages of companies with a high Application Level score are significantly higher than the averages of companies in the same sector.

3.3 Hypothesis Two

Companies with low Application Level ratings for the GRI referenced sustainability reports achieve below the sector average financial returns for the shareholders.

H_0 : There is no significant difference between the financial indicator averages of companies with a low Application Level score and companies in the same sector.

H_A : The financial indicator averages of companies with a low Application Level score are significantly lower than the averages of companies in the same sector.

3.4 Hypothesis Three

Companies with high Application Level ratings for the GRI reference sustainability reports achieve higher than the JSE average financial returns for the shareholders.

H_0 : There is no significant difference between the financial indicator averages of companies with a high Application Level score and companies on the JSE main board.

H_A : The financial indicator averages of companies with a high Application Level score are significantly higher than the averages of companies on the JSE main board.

3.5 Hypothesis Four

Companies with low Application Level ratings for the GRI referenced sustainability reports achieve below the JSE average financial returns for the shareholders.

H_0 : There is no significant difference between the financial indicator averages of companies with a low Application Level score and companies on the JSE main board.

H_A : The financial indicator averages of companies with a low Application Level score are significantly lower than the averages of companies on the JSE main board.

3.6 Hypothesis Five

Companies who submitted GRI referenced sustainability reports achieve higher average financial returns for the shareholders than companies with non-GRI referenced reports.

H_0 : There is no significant difference between the financial indicator averages of companies with GRI sustainability reports and companies with non-GRI sustainability reports.

H_A : There is a significant difference between the financial indicator averages of companies with GRI sustainability reports and companies with non-GRI sustainability reports.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Scope

The scope of this study is limited to the following:

- a) Listed companies on the JSE All Share Index in South Africa. The country limitation was selected to eliminate the difference in business environments that exist in different markets. The valid financial reports of the past three years for each company were retrieved from the I-Net Bridge Database.
- b) Companies in South Africa that submitted sustainable disclosure reports since 2010 and are registered on the online GRI Sustainable Disclosure Database (GRI Index, 2012). The GRI guidelines provide a recognised set of results that allow for benchmarking between different companies and are in most cases independently verified.

4.2 Research Design

The study is designed to make use of available secondary data and is quantitative and descriptive in character.

This study relates to two samples of data. The first sample is the GRI application level data represented by the Sustainability Application Rating [SAR] and the second sample is the three financial performance indicators for shareholder return.

By correlating the GRI application level to the three financial performance indicators, the strength of relation is shown. The correlation determines whether the GRI Application Level can be used as an indicator of financial performance.

4.2.1 Sustainability Application Rating

The Sustainability Application Rating [SAR] is a weighted value derived from the GRI Application Level and external assurance indications. The SAR includes a weighting for the report type and distinguish between the Non-GRI, GRI referenced and GRI-3x. The result of this process is a rating scale from 0 – 9 where null is the non-GRI report and 9 represent the application level A+, which has been externally checked and assured. Table 2 provide more detail on the calculation of the SAR value.

Table 2 SAR Calculation Matrix

Description	None	Low	Medium	High
Report Type	None=0	Non-GRI = 0	GRI Ref = +1	GRI-G3 = +3
Application Level	Undeclared = 0	C = +1	B = +3	A = +5
Status	Self = 0		GRI-Checked = +1	Third-party = +1

Table 3 details the category classification of the GRI application used in the analysis.

Table 3 The GRI Category

Application Level	Category
Undeclared	Low
C	Low
C+	Low
B	Medium
B+	Medium
A	High
A+	High

4.2.2 Corporate Financial Performance

Due to the focus on performance from a shareholder perspective, the first performance measurement will be the total shareholders return [TSR]. TSR is defined as the “net stock price change plus the dividends paid during that period” (QFinance, 2012). The calculation for TSR is as follows:

$$TSR = \frac{(Price_e - Price_b + Dividends)}{(Price_b)}$$

Where:

TSR	Total shareholder return
$Price_e$	Share Price at the end of period
$Price_b$	Share Price at the beginning of period
Dividend	Total dividends and special dividends paid over period

For this research the TSR is calculated from available data on the financial reports.

The second performance ratio to be used will be the price-to-earnings ratio [P/E]. The P/E is the share price divided by the earnings per share and can be explained as the number of years' profit it will take to return the share price. The P/E ratio depends on two things: its future earnings prospect and the risk associated with those earnings (Higgins, 2007, p. 58). The P/E average for listed companies is around 13, but it differs from sector to sector.

$$P/E = \frac{\text{Share Price}}{\text{Earnings per Share}}$$

The P/E for each year is directly available from the financial reports.

The third financial performance relates to increase in overall company value. This value is determined by using the market-to-book value (MTBV ratio), the mean of monthly market-to-book ratios (Drobetz, Schillhofer, & Zimmermann, 2004). A MTBV of one and higher shows that the share price is undervalued and the company have created value for the shareholders.

$$MTBV = \frac{\text{Share Price}}{\text{NAV per share}}$$

Where:

$$\text{NAV per share} = \frac{\text{Equity}}{\text{Number of Shares}}$$

The MTBV for each year is available directly from the financial reports.

4.3 Population

The population for the research consist of companies registered and trading on the main board of the JSE and who have submitted sustainability reports for registration on the GRI Sustainability Disclosure Database. The GRI Sustainability Disclosure Database provides the list of all the South African companies that have submitted sustainability reports to the GRI. The GRI created the online database in 2011 and for the first time included non-GRI related sustainability reports.

4.4 Sampling

The selecting criteria for the sample group is as follows:

- Member of the JSE main board;
- Financial reports at least three years and available on the I-Net Bridge database;
- Active share trading in the last year;
- Registered on the GRI Sustainability Disclosure Database with valid report data; and
- At least one sustainability report submitted since 2010.

4.4.1 Limitations of Sample

The following criteria are applicable to qualify as a sample:

- The company shares must be traded on the JSE over the period of 2009 to 2012;
- Audited Annual Financial Results are available; and
- Submitted GRI validated reports between 2010 - 2012, according to the 2006 G3 or 2011 G3.1 guidelines and registered on the GRI Sustainability Database.

4.5 Data Collection and Analysis

The data for the financial performance indicators was obtained from stock market financial records available from I-Net Bridge. The required variables from the financials were:

- Share Price at Year End;
- DPS (c) - Normal Dividends;
- DPS (c) - Special Dividends;
- Share Price / NAV - at Printout Date; and
- P/E Ratio at Preliminary Announcement Date.

The data for the GRI Application Level was collected from the GRI Sustainability Database available online from the GRI website, and the relative scores calculated according to the Table 2 SAR Calculation Matrix.

The following tests were done:

- Descriptive Statistics Analysis for all variables;
- Two sample t-test to determine the probability of significant differences in averages between GRI high and low score companies against sector averages for three financial indicators;
- Two sample t-test to determine the probability of significant differences in averages between GRI high and low score companies against the overall JSE averages for three financial indicators, and
- Two sample t-test to determine the probability of significant differences in averages between GRI and Non-GRI companies for three financial indicators.

CHAPTER 5: RESULTS

5.1 Description of the sample data

A total of 353 companies were registered and are trading on the main board of the JSE in September 2012. Of these companies, 316 annual financial statements were available on I-Net Bridge. All newly listed companies who did not have three years of financial data available were eliminated.

The GRI Sustainability Disclosure Database consists of 310 South African companies of which 221 matched the listed JSE companies. A few companies on the GRI list did not submit sustainability reports since 2010 and were eliminated from the list. In total 204 companies qualified to be part of the sample data for this research.

Since the Companies Act of 2008 as well as the King III Code became effective in 2009, more companies are submitting sustainability reports every year. Only 25 listed companies registered sustainability reports in 2009 and an additional 27 in 2010. On recommendation of the King III Code, more than 100 companies submitted their sustainability reports in 2011/2012 as part of an integrated financial report. Some of the multinational enterprises that are dual listed and have a secondary listing on the JSE have not submitted sustainability reports.

From the population defined above there are two major groups. The first group consist of 89 companies who submitted sustainability reports in accordance to G3, G3.1 or GRI Referenced. The second group is the non-GRI group consisting of 105 companies who submitted sustainability report in reference to the King III Code directly and/or in some cases included SRI compliant reporting. For the sector comparisons, the GRI group were divided into the different sectors according to the GRI and JSE classifications. The breakdown of the sectors is in Table 4. The sector analysis provide a comparison method of companies within the same industry and with the same environmental, labour and legislation restrictions.

Table 4 GRI Sectors in South Africa

Sector	Count
Agriculture	1
Automotive	1
Aviation	1
Chemicals	4
Commercial Services	1
Computers	3
Conglomerates	1
Construction	1
Construction Materials	5
Containers and Packaging	2
Diversified Industries	1
Energy	1
Energy Utilities	2
Equipment	5
Financial Services	10
Food and Beverage	6
Forest and Paper Products	2
Health Care Products	1
Healthcare Services	1
Household & Personal Products	2
Logistics	4
Media	2
Metals Products	1
Mining	18
Other	1
Real Estate	3
Retailers	3
Technology Hardware	2
Tourism/Leisure	3
Telecommunication	1
Grand Total	89

5.2 Data analysis

For all the hypothesis tests, the two sample t-test methodology was used. From the two sample t-test report the means and standard deviations were taken from the Descriptive Statistics Section. From the Test of Assumptions Section the decision for the Variance Ratio Equal-Variance Test, which indicates whether equal variances are rejected or not. This result determines in which section the hypothesis results are taken from. It is either from the Equal-Variance Test section or the Aspin-Welch Unequal-Variance Test section.

For all tests conducted, the confidence level is set to $\alpha = 0.05$ and the H_0 is rejected if the probability level is less than 5%, or $p < 0.05$.

5.2.1 Hypothesis one

Companies with high Application Level ratings for the GRI reference sustainability reports achieve higher than the sector average financial returns for the shareholders.

H_0 : There is no significant difference between the financial indicator averages of companies with a high Application Level score and companies in the same sector.

H_A : The financial indicator averages of companies with a high Application Level score is significantly higher than the averages of companies in the same sector.

$$H_0: u_1 - u_2 = 0$$

$$H_A: u_1 - u_2 < 0$$

The sample data used for this hypothesis included:

- Sector: Financial Services and Mining
- GRI category: High
- Financial Indicators:
 - MTBV for the last year;
 - TSR for last 3 years; and
 - P/E for the last year.

Financial services sector analysis

Variable definition:

$MTBV_{Sector}$	MTBV for the last year for all the companies in the financial services sector
$MTBV_{GRI_Hi}$	MTBV for the last year for companies with a high GRI score in the financial services sector
TSR_{Sector}	TSR for the past 3 years for all the companies in the financial services sector
TSR_{GRI_Hi}	TSR for the past 3 years for companies with a high GRI score in the financial services sector
P/E_{Sector}	P/E for the last year for all the companies in the financial services sector
P/E_{GRI_Hi}	P/E for the last year for companies with a high GRI score in the financial services sector

Table 5 Financial services sector GRI high score indicator results

Variable	Count	Mean	Std Dev	Variance Test	p-value	Hypothesis
MTBV _{Sector}	24	1.863	1.140	Cannot Reject Equal Variance	0.72	Cannot Reject H ₀
MTBV _{GRI_Hi}	2	1.355	0.445			
TSR _{Sector}	24	0.494	0.601	Cannot Reject Equal Variance	0.60	Cannot Reject H ₀
TSR _{GRI_Hi}	2	0.377	0.204			
P/E _{Sector}	24	10.945	4.736	Cannot Reject Equal Variance	0.58	Cannot Reject H ₀
P/E _{GRI_Hi}	2	10.25	2.192			

Figure 2 Financial services sector GRI high score indicators box plot

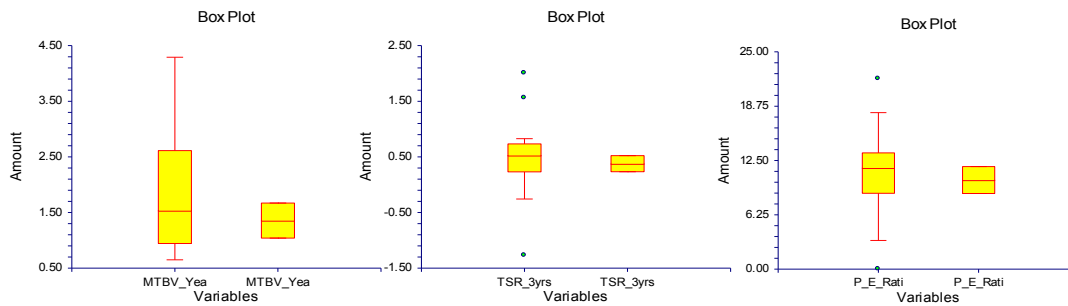
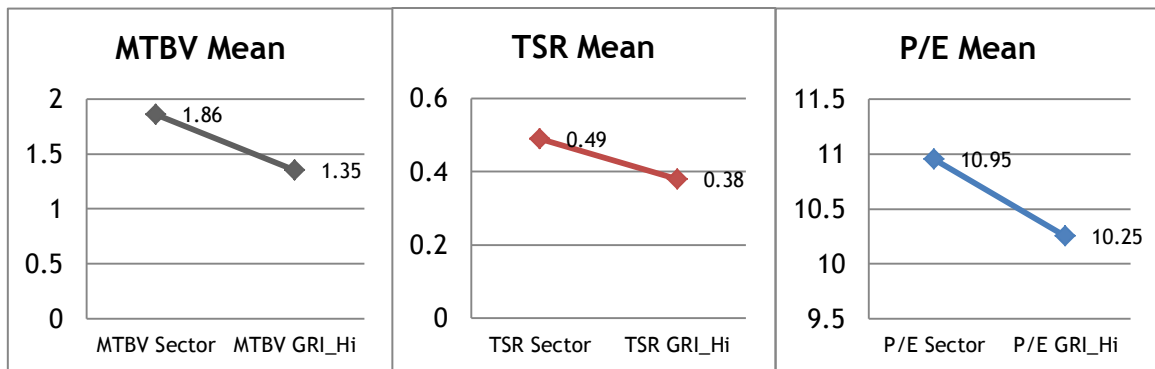


Figure 3 Financial services sector GRI high score indicators means



Analysis results

The GRI high category for financial services consisted of two cases only and can therefore not be used as a representative sample.

The H₀ cannot be rejected for MTBV, TSR and P/E. No conclusion can be derive from this dataset.

Mining sector analysis

Variable definition:

- MTBV_{Sector} MTBV for the last year for all the companies in the mining sector
- MTBV_{GRI_Hi} MTBV for the last year for companies with a high GRI score in the mining sector
- TSR_{Sector} TSR for the past 3 years for all the companies in the mining sector
- TSR_{GRI_Hi} TSR for the past 3 years for companies with a high GRI score in the mining sector
- P/E_{Sector} P/E for the last year for all the companies in the mining sector
- P/E_{GRI_Hi} P/E for the last year for companies with a high GRI score in the mining sector

Table 6 Mining sector GRI high score indicator results

Variable	Count	Mean	Std Dev	Variance Test	p-value	Hypothesis
MTBV _{Sector}	31	1.977	2.64	Reject Equal Variance	0.43	Cannot Reject H ₀
MTBV _{GRI_Hi}	4	2.075	0.566			
TSR _{Sector}	31	-0.085	0.919	Reject Equal Variance	0.11	Cannot Reject H ₀
TSR _{GRI_Hi}	4	2.265	0.204			
P/E _{Sector}	31	9.645	10.551	Cannot Reject Equal Variance	0.16	Cannot Reject H ₀
P/E _{GRI_Hi}	4	17.236	8.618			

Figure 4 Mining sector GRI high score indicators box plot

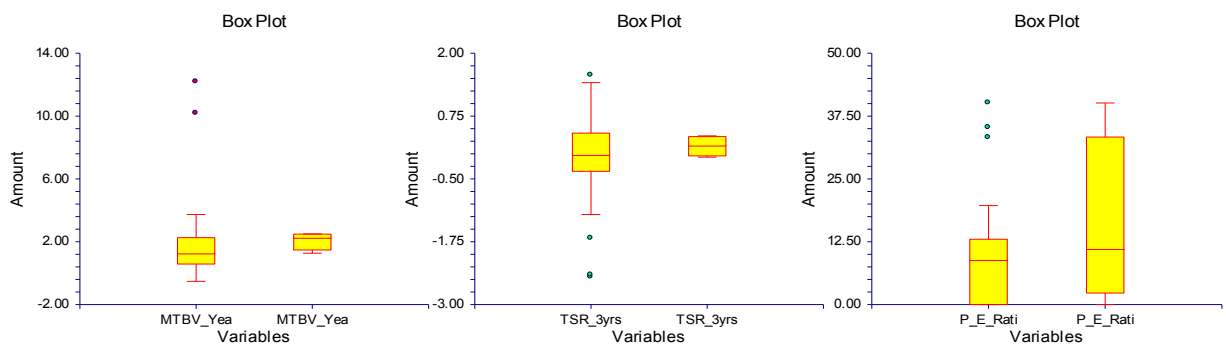
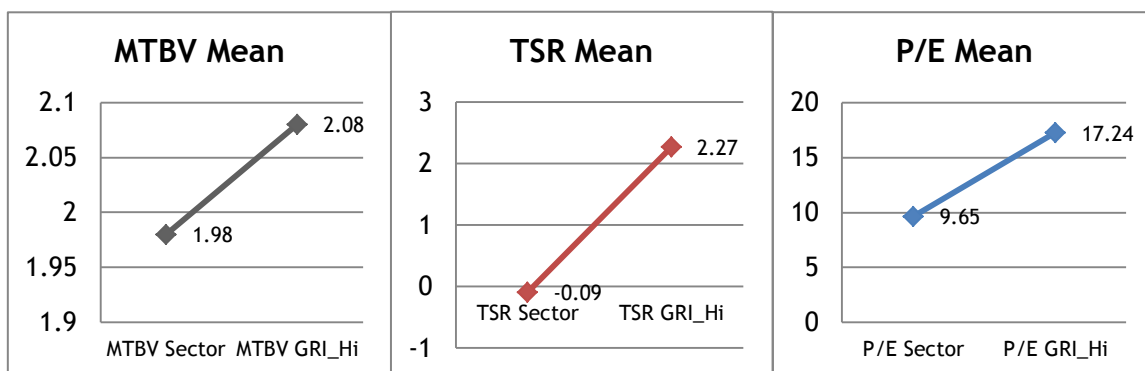


Figure 5 Mining sector GRI high score indicators means



Analysis results

Sample Size GRI_Hi has only four samples, which can influence the validity of this sample.

MTBV

Mean Small difference in the sample's means relative to the std. dev.
 Std. Var. The Std. Var. of the samples differs substantially with MTBV_{Sector} mean four times larger. Equal variance is rejected.
 p-value p-value = 0.43 > 0.05. The p-value is too big to reject H₀.
 Reject H₀ No, there is no significant difference in the sample means.

TSR

Mean There is a difference in the sample's means with TSR_{Sector} < 0.
 Std. Var. The Std. Var. of the samples differs substantially and TSR_{Sector} with two outliers. Equal Variance is rejected.
 p-value p-value = 0.11 > 0.05. The small p-value is close to α .
 Reject H₀ No, but the H₀ is nearly rejected.

P/E

Mean Big difference in the sample's means.
 Std. Var. There is a small difference in Std. Var. and equal variance cannot be rejected.
 p-value p-value = 0.16 > 0.05. The small p-value is close to α .
 Reject H₀ No, but the H₀ is nearly rejected.

5.2.2 Hypothesis two

Companies with low Application Level ratings for the GRI referenced sustainability reports achieve below the sector average financial returns for the shareholders.

H_0 : There is no significant difference between the financial indicator averages of companies with a low Application Level score and companies in the same sector.

H_A : The financial indicator averages of companies with a low Application Level score is significantly lower than the averages of companies in the same sector.

$$H_0: u_1 - u_2 = 0$$

$$H_A: u_1 - u_2 > 0$$

The sample data used for this hypothesis included:

- Sector: Financial Services and Mining
- GRI category: High
- Financial Indicators:
 - MTBV for the last year;
 - TSR for last 3 years; and
 - P/E for the last year.

Financial services analysis

Variable definition:

$MTBV_{Sector}$	MTBV for the last year for all the companies in the financial services sector
$MTBV_{GRI_{Lo}}$	MTBV for the last year for companies with a low GRI score in the financial services sector
TSR_{Sector}	TSR for the past 3 years for all the companies in the financial services sector
$TSR_{GRI_{Lo}}$	TSR for the past 3 years for companies with a low GRI score in the financial services sector
P/E_{Sector}	P/E for the last year for all the companies in the financial services sector
$P/E_{GRI_{Lo}}$	P/E for the last year for companies with a low GRI score in the financial services sector

Table 7 Financial services GRI low score indicator results

Variable	Count	Mean	Std Dev	Variance Test	p-value	Hypothesis
MTBV _{Sector}	24	1.863	1.140	Cannot Reject Equal Variance	0.81	Cannot Reject H ₀
MTBV _{GRI_Lo}	7	2.334	1.521			
TSR _{Sector}	24	0.494	0.601	Cannot Reject Equal Variance	0.53	Cannot Reject H ₀
TSR _{GRI_Lo}	7	0.5136	0.366			
P/E _{Sector}	24	10.945	4.736	Cannot Reject Equal Variance	0.57	Cannot Reject H ₀
P/E _{GRI_Lo}	7	11.271	2.124			

Figure 6 Financial services sector GRI low score indicators box plot

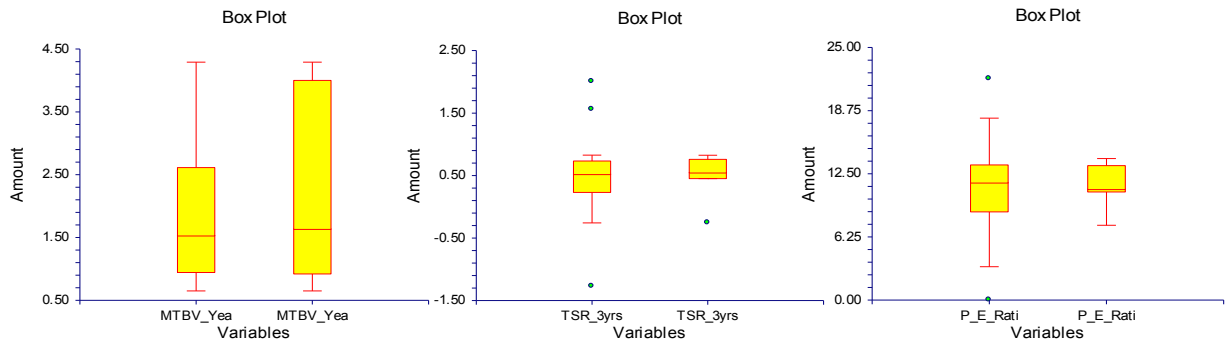
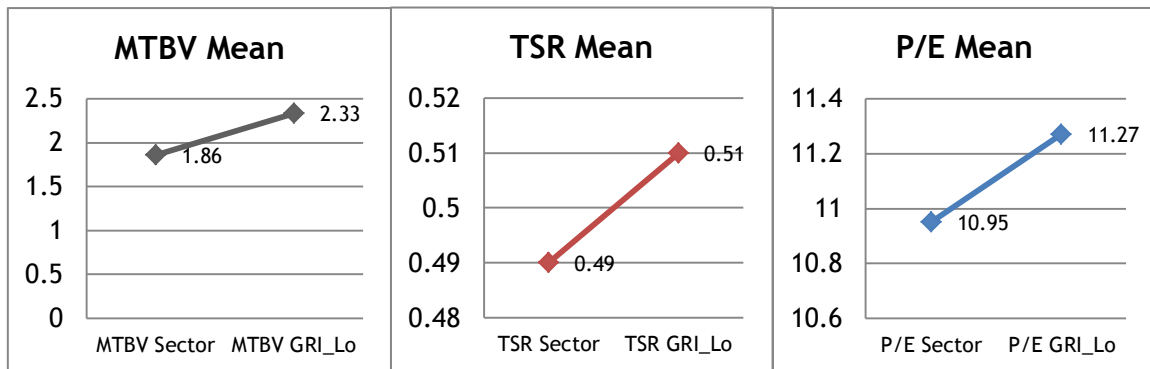


Figure 7 Financial services sector GRI low score indicators means



Analysis results

Sample Size GRI_Lo has seven samples and Sector has 24 samples.

MTBV

Mean MTBV_{GRI_Lo} mean is a little higher than MTBV_{Sector}.

Std. Var. The difference in Std. Var. is not significant.

p-value p-value = 0.81 > 0.05. The p-value is too big to reject H₀.

Reject H₀ No, there is no significant difference in the sample means.

TSR

Mean TSR_{GRI_Lo} mean is a little higher than TSR_{Sector}.

Std. Var. The difference in Std. Var. is not significant.

p-value p-value = 0.53 > 0.05. The p-value is too big to reject H₀.

Reject H₀ No, there is no significant difference in the sample means.

P/E

Mean P/E_{GRI_Lo} mean is a little higher than P/E_{Sector}.

Std. Var. The difference in Std. Var. is not significant.

p-value p-value = 0.57 > 0.05. The p-value is too big to reject H₀.

Reject H₀ No, there is no significant difference in the sample means.

Mining sector analysis

Variable definition:

- MTBV_{Sector} MTBV for the last year for all the companies in the mining sector
- MTBV_{GRI_Lo} MTBV for the last year for companies with a low GRI score in the mining sector
- TSR_{Sector} TSR for the past 3 years for all the companies in the mining sector
- TSR_{GRI_Lo} TSR for the past 3 years for companies with a low GRI score in the mining sector
- P/E_{Sector} P/E for the last year for all the companies in the mining sector
- P/E_{GRI_Lo} P/E for the last year for companies with a low GRI score in the mining sector

Table 8 Mining sector GRI low score indicator results

Variable	Count	Mean	Std Dev	Variance Test	p-value	Hypothesis
MTBV _{Sector}	31	1.977	2.64	Reject Equal Variance	0.08	Cannot Reject H0
MTBV _{GRI_Lo}	11	1.169	1.13			
TSR _{Sector}	31	-0.085	0.919	Cannot Reject Equal Variance	0.44	Cannot Reject H0
TSR _{GRI_Lo}	11	-0.390	1.012			
P/E _{Sector}	31	9.645	10.551	Cannot Reject Equal Variance	0.28	Cannot Reject H0
P/E _{GRI_Lo}	11	7.572	10.047			

Figure 8 Mining sector GRI low score indicators box plot

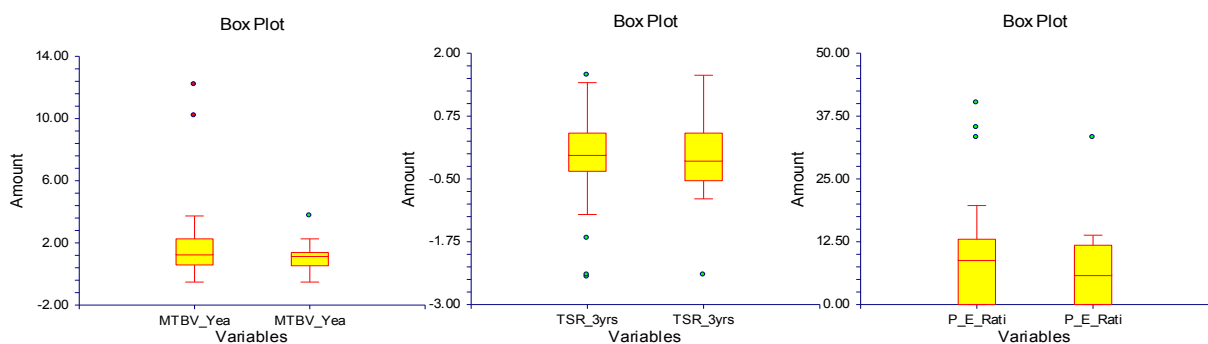
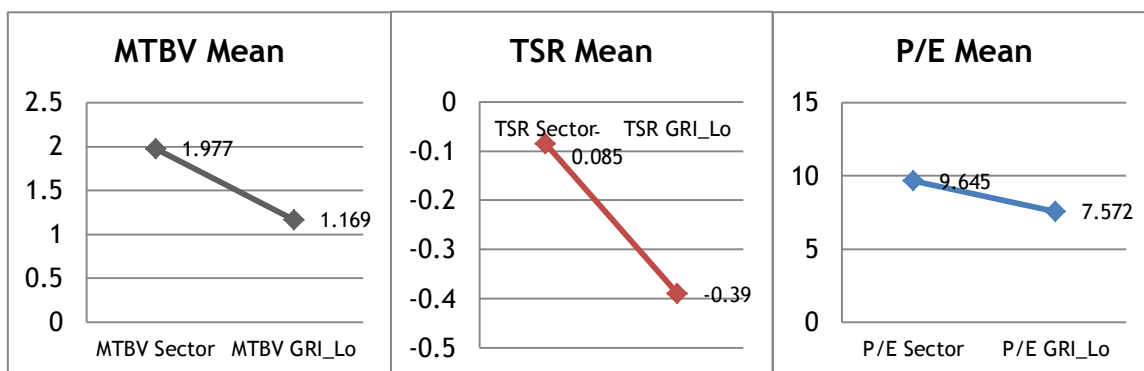


Figure 9 Mining sector GRI low score indicators means



Analysis results

Sample Size GRI_Lo has eleven samples and Sector has 31 samples.

MTBV

Mean MTBV_{GRI_Lo} mean is much lower than MTBV_{Sector}.

Std. Var. The difference in Std. Var. is significant. Equal variance is rejected.

p-value p-value = 0.08 > 0.05. The p-value is small, but cannot to reject H₀.

Reject H₀ No, but there is a difference in the sample means.

TSR

Mean TSR_{GRI_Lo} mean is a much lower than TSR_{Sector} mean.

Std. Var. The difference in Std. Var. is not significant.

p-value p-value = 0.44 > 0.05. The p-value is too big to reject H₀.

Reject H₀ No, there is no significant difference in the sample means.

P/E

Mean P/E_{GRI_Lo} mean is lower than P/E_{Sector} mean.

Std. Var. The difference in Std. Var. is not significant.

p-value p-value = 0.28 > 0.05. The p-value is too big to reject H₀.

Reject H₀ No, there is no significant difference in the sample means.

5.2.3 Hypothesis Three

Companies with high Application Level ratings for the GRI reference sustainability reports achieve higher than the JSE average financial returns for the shareholders.

H_0 : There is no significant difference between the financial indicator averages of companies with a high Application Level score and companies on the JSE main board.

H_A : The financial indicator averages of companies with a high Application Level score is significantly higher than the averages of companies on the JSE main board.

$$H_0: u_1 - u_2 = 0$$

$$H_A: u_1 - u_2 < 0$$

The sample data used for this hypothesis included:

- Sectors: All
- GRI category: High
- Financial Indicators:
 - MTBV for the last year;
 - TSR for last 3 years; and
 - P/E for the last year.

Analysis

Variable definition:

MTBV _{All}	MTBV for the last year for all the companies in all sections
MTBV _{GRI_Hi}	MTBV for the last year for companies with a high GRI score
TSR _{Allr}	TSR for the past 3 years for all the companies in all sections
TSR _{GRI_Hi}	TSR for the past 3 years for companies with a high GRI score
P/E _{All}	P/E for the last year for all the companies in all sections
P/E _{GRI_Hi}	P/E for the last year for companies with a high GRI score

Table 9 All sector GRI high score indicator results

Variable	Count	Mean	Std Dev	Variance Test	p-value	Hypothesis
MTBV _{All}	194	2.436	2.509	Reject Equal Variance	0.93	Cannot Reject H ₀
MTBV _{GRI_Hi}	13	1.765	1.432			
TSR _{Allr}	194	0.473	1.796	Cannot Reject Equal Variance	0.75	Cannot Reject H ₀
TSR _{GRI_Hi}	13	0.262	0.659			
P/E _{All}	194	12.911	11.138	Reject Equal Variance	0.29	Cannot Reject H ₀
P/E _{GRI_Hi}	13	15.530	16.763			

Figure 10 All sector GRI high score indicators box plot

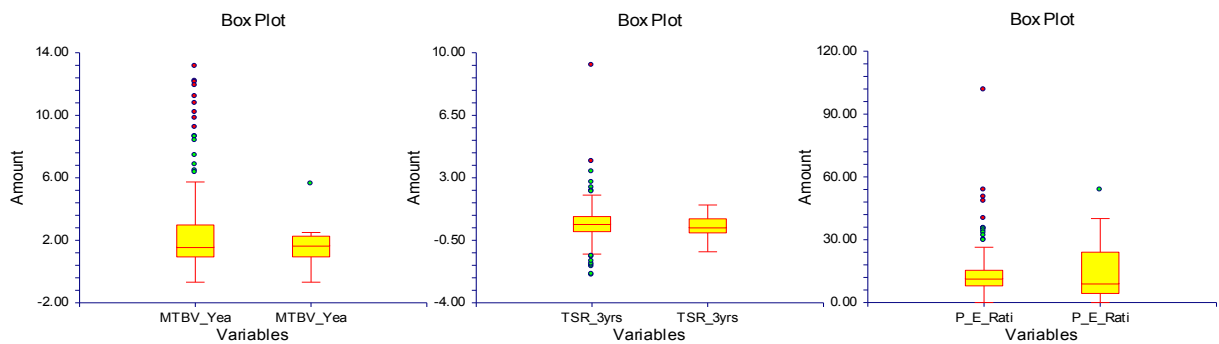
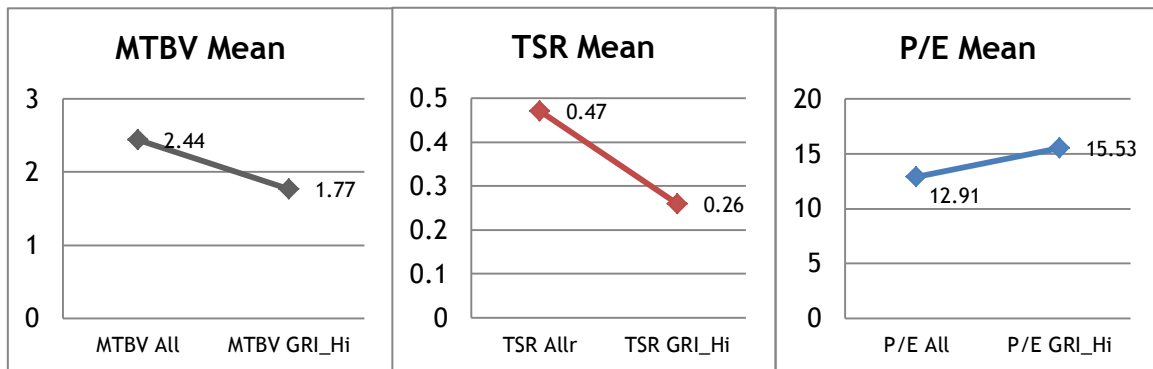


Figure 11 All sector GRI high score indicators means



Analysis results

Sample Size GRI_Hi has thirteen samples and All Sectors has 194 samples.

MTBV

Mean MTBV_{GRI_Hi} mean is a lower than MTBV_{All} mean; wrong direction.

Std. Var. The difference in Std. Var. is significant. Equal variance is rejected.

p-value p-value = 0.93 > 0.05. The p-value is large and cannot to reject H₀.

Reject H₀ No, there is no significant difference in the sample means.

TSR

Mean TSR_{GRI_Hi} mean is a much lower than TSR_{All} mean, wrong direction.

Std. Var. The difference in Std. Var. is large, but equal variance cannot be rejected.

p-value p-value = 0.75 > 0.05. The p-value is too big to reject H₀.

Reject H₀ No, there is no significant difference in the sample means.

P/E

Mean P/E_{GRI_Hi} mean is higher than P/E_{All} mean.

Std. Var. The difference in Std. Var. is significant. Equal variance is rejected.

p-value p-value = 0.29 > 0.05. The p-value is too big to reject H₀.

Reject H₀ No, there is no significant difference in the sample means.

5.2.4 Hypothesis Four

Companies with high Application Level ratings for the GRI reference sustainability reports achieve higher than the JSE average financial returns for the shareholders.

H_0 : There is no significant difference between the financial indicator averages of companies with a high Application Level score and companies on the JSE main board.

H_A : The financial indicator averages of companies with a high Application Level score is significantly higher than the averages of companies on the JSE main board.

$$H_0: u_1 - u_2 = 0$$

$$H_A: u_1 - u_2 > 0$$

The sample data used for this hypothesis included:

- Sectors: All
- GRI category: High
- Financial Indicators:
 - MTBV for the last year;
 - TSR for last 3 years; and
 - P/E for the last year.

Variable definition:

MTBV _{All}	MTBV for the last year for all the companies in all sections
MTBV _{GRI_Lo}	MTBV for the last year for companies with a low GRI score
TSR _{Allr}	TSR for the past 3 years for all the companies in all sections
TSR _{GRI_Lo}	TSR for the past 3 years for companies with a low GRI score
P/E _{All}	P/E for the last year for all the companies in all sections
P/E _{GRI_Lo}	P/E for the last year for companies with a low GRI score

Table 10 All sector GRI low score indicator results

Variable	Count	Mean	Std Dev	Variance Test	p-value	Hypothesis
MTBV _{All}	194	2.436	2.509	Cannot Reject Equal Variance	0.53	Cannot Reject H ₀
MTBV _{GRI_Lo}	61	2.465	2.478			
TSR _{Allr}	194	0.473	1.796	Reject Equal Variance	0.20	Cannot Reject H ₀
TSR _{GRI_Lo}	61	0.367	0.813			
P/E _{All}	194	12.911	11.138	Reject Equal Variance	0.54	Cannot Reject H ₀
P/E _{GRI_Lo}	61	13.048	7.615			

Figure 12 All sector GRI low score indicators box plot

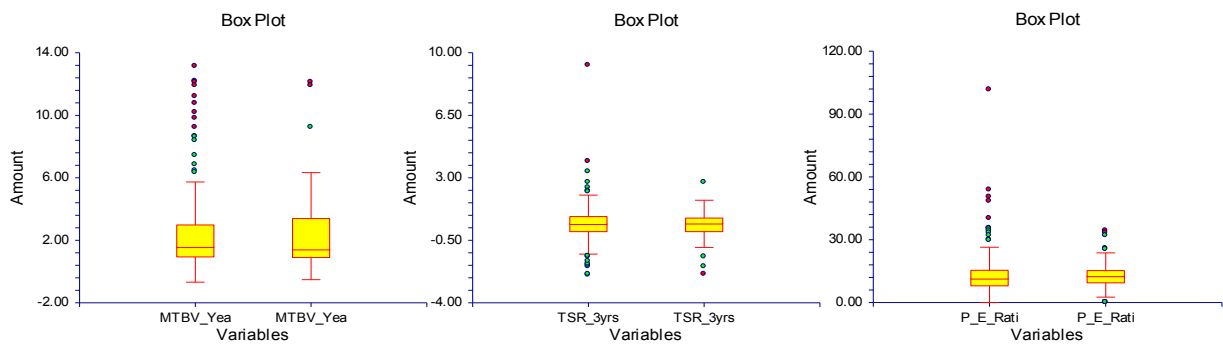
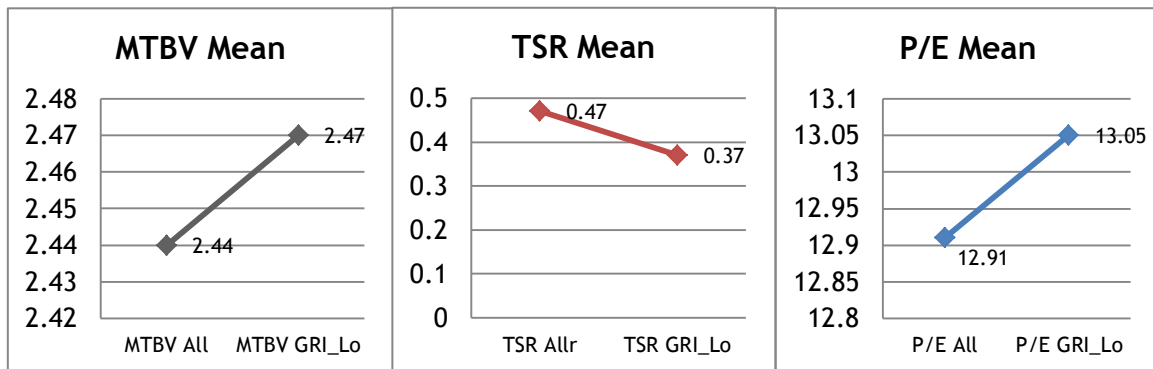


Figure 13 All sector GRI low score indicators means



Analysis results

Sample Size GRI_Lo has 61 samples and All Sectors has 194 samples.

MTBV

Mean There a very small difference in the means.

Std. Var. The difference in Std. Var. is very small. Cannot reject Equal variance.

p-value p-value = 0.53 > 0.05. The p-value is large and cannot to reject H_0 .

Reject H_0 No, there is no significant difference in the sample means.

TSR

Mean TSR_{GRI_Lo} mean is a lower than TSR_{All} mean.

Std. Var. The difference in Std. Var. is large. Equal variance is rejected.

p-value p-value = 0.20 > 0.05. The p-value is small, but too big to reject H_0 .

Reject H_0 No, there is no significant difference in the sample means.

P/E

Mean There is a small difference in the means.

Std. Var. The difference in Std. Var. is significant. Equal variance is rejected.

p-value p-value = 0.54 > 0.05. The p-value is too big to reject H_0 .

Reject H_0 No, there is no significant difference in the sample means.

5.2.5 Hypothesis Five

Companies who submitted GRI referenced sustainability reports achieve higher average financial returns for the shareholders than companies with non-GRI referenced reports.

H_0 : There is no significant difference between the financial indicator averages of companies with GRI sustainability reports and companies with non-GRI sustainability reports.

H_A : There is a significant difference between the financial indicator averages of companies with GRI sustainability reports and companies with non-GRI sustainability reports.

$$H_0: u_1 - u_2 = 0$$

$$H_A: u_1 - u_2 > 0$$

The sample data used for this hypothesis included:

- Sectors: All
- GRI category: All
- GRI type: GRI; Non-GRI
- Financial Indicators:
 - MTBV for the last year;
 - TSR for last 3 years; and
 - P/E for the last year.

Variable definition:

$MTBV_{GRI}$	MTBV for the last year for companies with a GRI report
$MTBV_{Non-GRI}$	MTBV for the last year for companies with a Non-GRI report
TSR_{GRI}	TSR for the past 3 years for the companies with a GRI report
$TSR_{Non-GRI}$	TSR for the past 3 years for companies with a Non-GRI report
P/E_{GRI}	P/E for the last year for the companies with a GRI report
$P/E_{Non-GRI}$	P/E for the last year for companies with a Non-GRI report

Table 11 Type GRI versus Non-GRI indicator results

Variable	Count	Mean	Std Dev	Variance Test	p-value	Hypothesis
MTBV _{GRI}	89	2.38	2.36	Cannot Reject Equal Variance	0.60	Cannot Reject H ₀
MTBV _{Non-GRI}	105	2.48	2.64			
TSR _{GRI}	89	0.42	0.85	Reject Equal Variance	0.74	Cannot Reject H ₀
TSR _{Non-GRI}	105	0.52	1.24			
P/E _{GRI}	89	14.28	13.05	Reject Equal Variance	0.06	Cannot Reject H ₀
P/E _{Non-GRI}	105	11.75	9.12			

Figure 14 Type GRI versus Non-GRI indicators box plot

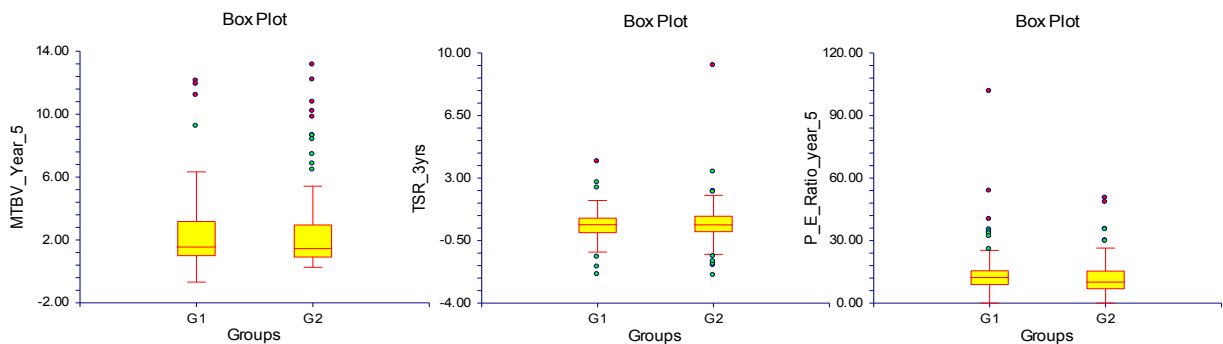
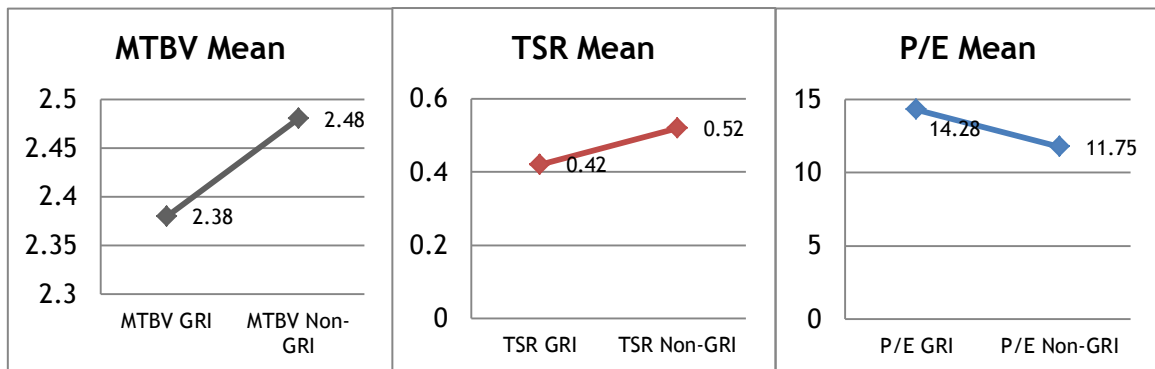


Figure 15 Type GRI versus Non-GRI indicators means



Analysis results

Sample Size GRI has 89 samples and Non-GRI has 105 samples.

MTBV

Mean There a very small difference in the means.

Std. Var. The difference in Std. Var. is very small. Cannot reject Equal variance.

p-value p-value = 0.60 > 0.05. The p-value is large and cannot to reject H_0 .

Reject H_0 No, there is no significant difference in the sample means.

TSR

Mean The TSR_{GRI} mean is a lower than the TSR_{nonGRI} mean.

Std. Var. The difference in Std. Var. is large. Equal variance is rejected.

p-value p-value = 0.74 > 0.05. The p-value is too big to reject H_0 .

Reject H_0 No, there is no significant difference in the sample means.

P/E

Mean The P/E_{GRI} mean is a higher than the P/E_{nonGRI} mean.

Std. Var. The difference in Std. Var. is significant. Equal variance is rejected.

p-value p-value = 0.06 > 0.05. The p-value is very close to α and within 1% to reject H_0 .

Reject H_0 No, but notably close to the rejecting H_0 . There is a difference in the sample means.

CHAPTER 6: DISCUSSION OF RESEARCH RESULTS

6.1 Introduction

The purpose of the research is to provide empirical evidence that the current sustainability report rating classification can be used as an indicator of financial performance of a company. This research focused particularly on the South African market, whereby international acknowledged governance practices have been introduced in the form of the King Code for Corporate Governance (IoDSA, 2009) and listed companies on the JSE have to comply with this King Code. In the research, the Application Level ranking system of the GRI was used to determine the benchmark level of a submitted GRI report. This benchmark level was then used to compare the financial performance of companies in relation to their sector and also to the overall listed market.

It was established through the literature review that there is a global trend towards social, environmental and economic sustainability initiatives. The United Nations' Earth Summits have established the sustainability principles and future roadmap and countries have committed to certain pro-active changes to meet obligations at certain milestones (SAICA, 2012). Due to these commitments and continuing pressure from environmental and social activists, governments are changing regulatory requirements for companies and other organisations to conform to sustainability principles through responsible corporate governance.

In South Africa, the King Code was amended in response to changes to mandatory sustainability related regulations in the Companies Act of 2008. Companies trading on the JSE are now required to comply to the King III Code and in addition report on indicators for the JSE Social Responsibility Investment index. A large portion of the JSE companies uses the GRI Guideline framework to assist them in reporting on the King III principles. The use of the GRI Guidelines provide further international recognition to companies for sustainability reporting standards (GRI, 2011).

It was established in the literature review that there is a relation between the level of environmental initiatives and reporting of the financial performance of a company according to Al-Tuwaijri et al (2004) and Hunt et al (2004) and further between corporate governance compliance and financial performance Abdo et al (2007).

The gap identified with sustainability reporting is the lack of international recognised measurement criteria that would be applicable to different industries in different

environments. Guidelines including the GRI framework make use of an index of indicators, but the actual responses are mostly qualitative, leaving the perception of the response open to interpretation. One solution is to evaluate the quality of a company's sustainability strategy on the number of compliance to indicators in a report. This method does not incorporate the quality of the response to the principle.

The ability to benchmark the sustainability efforts is important for the following reasons:

- For the companies to receive fair recognition for the sustainability initiative implemented, but also to be able to compare their own efforts with the sustainability drive of their competitors and leaders in other industries. A true reflection of the effects of sustainability initiative will provide the basis for motivation of additional resources to improve the rankings.
- External stakeholders need to gauge the sustainability progress of companies, industries and even countries. These stakeholders include government departments, NCO's, stock exchanges, environmental organisations, industry regulatory organisations, institutional investors and shareholders.

Investors use different financial indicators to analyse the investment opportunity of a company. The lack of a reliable sustainability benchmark compromises the ability of investors to make sustainability strategy part of their decision criteria.

In the South African context, the GRI Application Level provides the only type of benchmark that is widely used and provides some level of recognition, although very limited, of sustainability performance achieved. This research seeks the evidence whether the Application Level ranking is a proxy for the financial performance of a company.

The methodology used for reaching the conclusion was to classify the Application Level according to criteria into categories of High, Medium and Low. The averages of three financial indicators of the companies in the GRI high or low category were compared to the averages of the three financial indicators of all the companies in the same sector or grouping.

The three financial indicators used for the hypothesis are:

- MTBV – Market to book value or the share price per the equity per share.
- TSR – Total shareholder return or share capital gain plus dividend received over a period.
- P/E – Share price / earnings per share.

6.2 Discussion of hypothesis one

In this hypothesis, the GRI Application Level is used to compare the financial performance of companies with a high Application Level category rating with the average of all the companies in the sector.

By comparing the financial performances by sector, companies with similar industry opportunities, limitations through regulation, environmental challenges and market conditions are compared. Most of these companies are in competition with each other and are vulnerable to similar labour incidents and union activities.

The hypothesis is that if the GRI Application Level and the derived category is an indicator of the level of financial performance of a company, then a high category company will outperform the average financial performance of the companies in the same sector.

The JSE listed companies are divided into sectors similar to the sector categories used by other markets. The GRI uses a similar sector category breakdown than the JSE. In sample data, the number of companies divided into each of the sectors is low which made it impractical to use more than two of the most populous sectors. The sectors used were the financial services and mining sectors.

Hypothesis one - financial services sector

The financial services sector in the sample consisted of only 10 companies in the GRI compliant group and 25 companies in the sector. Unfortunately, there were only two companies in the GRI High category group. The low number of records in the sample does not allow for good representative statistical analysis, and therefore even if the statistical data are presented in Chapter 5, no empirical conclusion could be derived.

Hypothesis one - mining sector

The mining sector in the sample consisted of 18 companies in the GRI compliant group and 31 companies in the sector. There were four companies in the GRI High category sample.

MTBV

The MTBV average for the GRI High category is slightly higher than the sector average, but the very large standard deviation for the sector sample made the difference insignificant.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI High category companies have a higher average for the MTBV financial indicator than the mining sector average.

TSR

The TSR average for the GRI High category is higher than the sector average. The sector average is < 0 , which indicate a poor performance from the sector in terms of shareholders return. There is a large difference in the standard deviation for the samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI High category companies have a higher average for the TSR financial indicator than the mining sector average.

P/E

The P/E average for the GRI High category is much higher than the sector average. The sector average is almost half the average of the GRI High companies. There is a small difference in the standard deviation for the samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI High category companies have a higher average for the P/E financial indicator than the mining sector average.

Conclusion for hypothesis one

The statistical results presented for the three financial performance indicators show that there is no evidence that companies with a high Application Level rating achieve higher than sector average financial returns for shareholders.

6.3 Discussion of hypothesis two

In this hypothesis, the GRI Application Level is used to compare the financial performance of companies with a low Application Level category rating with the average of all the companies in the sector.

The hypothesis states that if the GRI Application Level and the derived category is an indicator of the level of financial performance of a company, then a GRI Low category company will underperform the average financial performance of the companies in the same sector.

The sectors used in this hypothesis were the financial services and mining sectors.

Hypothesis two - financial services sector

The financial services sector in the sample consisted of only 10 companies in the GRI compliant group and 24 companies in the sector. There were seven companies in the GRI Low category sample.

MTBV

The MTBV average for the GRI Low category is slightly higher than the sector average, which is in the wrong direction for the hypothesis. There is a small difference in the standard deviation for the two samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI Low category companies have a lower average for the MTBV financial indicator than the financial services sector average.

TSR

The TSR average for the GRI Low category is higher than the sector average, which is in the wrong direction for the hypothesis. There is a small difference in the standard deviation for the two samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI Low category companies have a lower average for the TSR financial indicator than the financial services sector.

P/E

The P/E average for the GRI Low category is a little higher than the sector average, which is in the wrong direction for the hypothesis. There is a small difference in the standard deviation for the samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI Low category companies have a lower average for the P/E financial indicator than the financial services sector average.

Hypothesis two - mining sector

The mining sector in the sample consisted of 18 companies in the GRI compliant group and 31 companies in the sector. There were eleven companies in the GRI Low category sample.

MTBV

The MTBV average for the GRI Low category is much lower than the sector average, and the standard deviation of the GRI Low sample is smaller.

The probability that the two sample averages are equal is very low and missed the $\alpha=0.05$ with only 3%. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI High category companies have a lower average for the MTBV financial indicator than the mining sector average.

TSR

The TSR average for the GRI Low category is lower than the sector average. The GRI Low and sector average is < 0 , which indicate a poor performance from the sector in terms of shareholders return. There is a small difference in the standard deviation for the samples.

The probability that the two sample averages are equal is high and the hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI Low category companies have a lower average for the TSR financial indicator than the mining sector average, although in this case it was very close to the selected confidence level.

P/E

The P/E average for the GRI Low category is lower than the sector average. There is a small difference in the standard deviation for the samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI Low category companies have a higher average for the P/E financial indicator than the mining sector average.

Conclusion for hypothesis two

The statistical results presented for the three financial performance indicators for two sectors show that there is no evidence that companies with a low Application Level rating achieve lower than sector average financial returns for shareholders.

6.4 Discussion of hypothesis three

In this hypothesis, the GRI Application Level is used to compare the financial performance of companies with a high Application Level category rating with the average of all the companies on the JSE.

The hypothesis states that if the GRI Application Level and the derived category is an indicator of the level of financial performance of a company, then a GRI High category company will outperform the average financial performance of the companies on the JSE.

All the sectors were used in this hypothesis.

Hypothesis three – all sectors

The sample consisted of 89 companies in the GRI compliant group and 194 companies in all the sectors. There were 13 companies in the GRI High category sample.

MTBV

The MTBV average for the GRI High category is slightly lower than the all sector average, which is in the wrong direction for the hypothesis. There is a significant difference in the standard deviation for the two samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI High category companies have a higher average for the MTBV financial indicator than the average of the JSE companies.

TSR

The TSR average for the GRI High category is lower than the all sector average, which is in the wrong direction for the hypothesis. There is a difference in the standard deviation for the two samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI High category companies have a higher average for the TSR financial indicator than the sector average for all sectors on the JSE.

P/E

The P/E average for the GRI High category is higher than the all sector average. There is a small difference in the standard deviation for the samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI High category companies have a higher average for the P/E financial indicator than the all sector average of the JSE companies.

Conclusion for hypothesis three

The statistical results presented for the three financial performance indicators for all sectors show that there is no evidence that companies with a high Application Level rating achieve higher than sector average financial returns for shareholders.

6.5 Discussion of hypothesis four

In this hypothesis, the GRI Application Level is used to compare the financial performance of companies with a low Application Level category rating with the average of all the companies on the JSE.

The hypothesis states that if the GRI Application Level and the derived category is an indicator of the level of financial performance of a company, then a GRI Low category company will outperform the average financial performance of the companies on the JSE.

All the sectors were used in this hypothesis.

Hypothesis four – all sectors

The sample consisted of 89 companies in the GRI compliant group and 194 companies in all the sectors. There were 61 companies in the GRI Low category sample.

MTBV

The MTBV average for the GRI Low category is slightly higher than the all sector average, which is in the wrong direction for the hypothesis. There is no significant difference in the standard deviation for the two samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI Low category companies have a lower average for the MTBV financial indicator than the average of the JSE companies.

TSR

The TSR average for the GRI Low category is not significant lower than the all sector average. There is a difference in the standard deviation for the two samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI Low category companies have a lower average for the TSR financial indicator than the sector average for all sectors on the JSE.

P/E

The P/E average for the GRI Low category is not significantly higher than the all sector average. There is a difference in the standard deviation for the samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI Low category companies have a lower average for the P/E financial indicator than the all sector average of the JSE.

Conclusion for hypothesis four

The statistical results presented for the three financial performance indicators for all sectors show that there is no evidence that companies with a low Application Level rating achieve lower than all sector average financial returns for shareholders.

6.6 Discussion of hypothesis five

In this hypothesis, the financial performance of companies with GRI type sustainable reports is compared to the financial performance of companies with Non-GRI sustainable reports. This hypothesis is important to establish if there is a difference in financial performance for companies who decide to use the King III Code and comply to the SRI index, but not use the GRI guideline for sustainability reporting.

The hypothesis states that if there is a positive relationship between environmental performance, environmental disclosures and financial performance of a company (Al-Tuwaijri, et al, 2004) , then companies with a GRI compliant sustainable report will outperform the average financial performance of the companies with non-GRI compliant reports.

Hypothesis five – GRI versus Non-GRI

The sample consisted of 89 companies in the GRI compliant group and 194 companies in all the sectors. There were 13 companies in the GRI High category sample.

MTBV

The MTBV average for the GRI sample is slightly lower than the Non-GRI sample average, which is in the wrong direction for the hypothesis. There is no significant difference in the standard deviation for the two samples.

The probability that the two sample averages are equal is high. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI companies have a higher average for the MTBV financial indicator than the average of the Non-GRI companies.

TSR

The TSR average for the GRI sample is higher than the Non-GRI average. There is a large difference in the standard deviation for the two samples.

The probability is high that the two sample averages are equal. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI companies have a higher average for the TSR financial indicator than the average of the Non-GRI companies.

P/E

The P/E average for the GRI category is higher than the all sector average. There is a small difference in the standard deviation for the samples.

The probability is low that the two sample averages are equal, with the p-value of only 0.06. The hypothesis that the averages of the two samples are equal cannot be rejected.

Result: There is no evidence to show that the GRI companies have a higher average for the P/E financial indicator than the average of the Non-GRI companies.

Conclusion for hypothesis three

The statistical results presented for the three financial performance indicators for all sectors show that there is no evidence that companies with a high Application Level rating achieve higher than sector average financial returns for shareholders.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

Sustainability reporting is a process whereby stakeholders are engaged to focus on the responsibility of organisations to actively pursue initiatives to curb their impact on the environment, to uplift and support the society they touch, and to ensure the economic viability of the organisation through good corporate governance. Sustainability reporting is more than just another report submitted annually. It should reflect the strategic intent of organisations to continually increase their commitment towards all three dimensions of sustainability. Reporting guidelines aim to provide standardise frameworks that would assist companies to report on the principles or indicators in a standard format, enabling a limited level of measurement through indexing. One of the challenges of the guidelines are that there are not a globally accepted standard of measurement of the sustainability indicators. Various organisations are promoting their own standards in the race to become the global standard.

Without the consolidation of these standards, results from sustainable reports will be applicable only to the guideline used. Therefor comparisons across the different guidelines are currently not possible. Finding a fair and truly reflective measurement system is very difficult due to the nature of the content of the sustainable indicators.

Research has shown that an increase in sustainability initiative and in the quality of the reporting on the initiatives leads to an increase in financial performance (Al-Tuwaijri et al, 2004). In South Africa, the GRI framework is gaining traction and it offers a limited system of ranking through the GRI Application Level declared for sustainable report.

The aim of this research was to prove that the GRI Application Level is an indicator of the financial performance of companies listed on the JSE.

7.2 Findings

The findings are conclusive that in the South African context, the GRI Application Level is not an indicator of the financial performance of companies trading on the JSE.

The possible reason for this result can be found in the way the GRI Application Level is declared. The GRI Application Level represent the coverage of the report against the

framework of indicators and whether it was externally verified and assured. The Application Level does not relate directly to the quality of the content or the effectiveness and impact of the initiatives reported on.

The implication of this finding is that companies will find it very difficult to motivate the business case to commit additional resources to improve their GRI Application Level. Currently only 13 companies in the reference group of 194 companies submitted sustainability reports with a rating of A+. This may lead to the disinvestment initiatives or reduction in budget for future sustainability initiatives. Ultimately, it may lead to more companies deciding to pursue a less costly reporting route by not investing in resources to compile and assure the sustainability report according to the GRI guideline. This finding might also prevent additional companies to submit GRI compliant sustainability reports in future. In the sample group, less than half of the companies submitted GRI compliant sustainability reports.

7.3 Limitations of the research

This research was limited to the companies trading on the JSE in South Africa. Sustainability reporting is still relatively new in South Africa and the companies still have to mature in the way these reports are compiled and presented. The complexity of new requirements for sustainability reporting to be included in the integrated reports will take time and effort to mature into acceptable practices.

7.4 Recommendations

Currently the GRI is reviewing the contents and structure of the GRI Framework to create the GRI Guideline 4. One of the focus points was to revamp the Application Level criteria, but it is still uncertain if the new Application Level will provide the depth and fair reflection of the actual sustainability efforts in a standardised way and to be used as an indicator of real sustainability performance and potential financial performance.

My recommendation is that sustainability organisations continue to engage stakeholders to create globally acceptable sustainability standards, principles and best practices that can be measured in a fair and truly representative way to enable benchmarking of sustainable performance.

7.5 Conclusion

The current GRI Application Level system fails to represent the actual sustainability performance of companies submitting GRI compliant sustainability report. The GRI Application Level cannot be used as an indicator of a company's financial performance in the South African context.

The demand on governments, organisations and companies to increase sustainability initiatives will continue in the future. The pace of adaption to new sustainability reporting guidelines and standards depends on the ability of these frameworks to provide measureable rating system that truly represents the impact of sustainability initiatives.

The conclusion is that a globally acceptable measurement standard for sustainability reporting is vital to motivate companies to reach higher levels of sustainability and financial performance.

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