An analysis of occupational health and safety disclosure of JSE Socially Responsible Investment Index constituents

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A. Abstract

Due to the growing importance for companies to report on more than economic performance, sustainability reporting tools such as the GRI and triple bottom-line reporting have been developed. Reporting practices have changed radically worldwide, leading to more transparent reporting on environmental and social sustainability.

This study analyses the occupational health and safety disclosure of the constituents of the JSE SRI index against guidelines set by the GRI's G4 guidelines for sustainability reporting, as well as other occupational health and safety indicators. The study also analysed the concept of materiality regarding occupational health and safety in the reports of these companies.

The study concluded that companies who publish separate sustainability reports had a higher level of occupational health and safety disclosure, and companies who publish a GRI checklist, either as part of their sustainability reports or as a separate report, had an even higher level of disclosure than companies who published a sustainability report.

It was also noticed that not all of the companies who are constituents of the JSE SRI index list occupational health and safety as a material issue. Of the sectors who listed occupational health and safety as a material issue, the materials sector had the highest level of disclosure, driven by a high level of disclosure among mining companies.

B. Keywords

Title: An analysis of occupational health and safety disclosure of JSE Socially Responsible Investment index constituents

Keywords: Occupational health and safety; disclosure; integrated reporting; Global Reporting Initiative (GRI); Socially Responsible Investment (SRI) index; responsible investment.

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D. Declaration regarding plagiarism

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F. List of Abbreviations

Abbreviation	Description
BP	British petroleum
CEO	Chief Executive Officer
CERES	Coalition for Environmentally Responsible Economics
DPSIR	Drivers, Pressures, States, Impacts and Responses
EIRIS	Ethical Investment Research Services
ESG	Environmental, Social, and Corporate Governance
FTSE	Financial Times and the London Stock Exchange
GICS	Global Industry Classification System
GRI	Global Reporting Initiative
HSE	United Kingdom Health and Safety Executive
IIRC	International Integrated Reporting Council
ILO	International Labour Organization
IRC SA	Integrated Reporting Council of South Africa
ISO	International Standards Organization

JSE	Johannesburg Stock Exchange
MSCI	Morgan Stanley Capital International
OHS	Occupational Health and Safety
OHSAS	Occupational Health and Safety Assessment Series
SER	Social Environmental reporting
TRIR	Total Recordable Incident Rate
WBCSD	World business council for sustainable development

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1 Introduction to the study

1.1 Introduction

Over the past decade there has been an increasing emphasis on combining stand-alone reports on environmental and sustainability performance with sustainability and governance reporting. This integration is deemed essential if companies are to embed stakeholder accountability within the foundations of their operations (Solomon & Maroun, 2012). Companies who report superior environmental, social and governance (ESG) performance have the opportunity to attract investors by meeting the requirements for ethical investment funds such as the FTSE4Good and the Dow Jones Sustainability index. Recent investment trends have seen investors focusing more on corporate social responsibility, and increasingly demand non-financial reporting for the purpose of risk analysis (O'Neill, Flanagan & Clarke, 2016).

Reporting practices worldwide are radically changing due to stakeholders demanding that companies critically re-evaluate the way in which they report, to ensure that it is as transparent as possible (Ernst & Young, 2012). Catastrophic occupational health and safety (OHS) incidents — such as the 2010 Deepwater Horizon oil well, the 2010 Pike River mine incident and the 2005 explosions at the BP Texas city plant — have highlighted the fact that inadequate OHS systems can lead to significant financial losses, which makes the management of OHS risks an important governance issue (O'Neill *et al*., 2016).

The King IV (IODSA, 2016) report on corporate governance in South Africa mandates that companies compile integrated reports which combine financial and non-financial performance reporting in such a way that it promotes corporate strategy. The Global Reporting Initiative (GRI) guidelines is a tool which was developed for companies to compile integrated reports which report on sustainability as well as economic performance, making reports less varied in content, more comparible and more complete (Brown, de Jong & Lessidrenska, 2009). Frameworks like the GRI have been increasingly adopted by companies worldwide due to the demand by stakeholders for greater transparency (Siew, 2015).

In May 2004, the JSE launched the JSE SRI index, which was developed based on the King III report and the GRI reporting guidelines. This index was launched to provide a guideline on reporting on sustainability and toassist investors on investment in

sustainable companies. The JSE SRI Index is a rating tool for investors, which offers alignment with global standards while regarding the complex nature of social responsibility in South Africa (Maubane, Prinsloo & van Rooyen, 2014). The JSE (2014) lists the purpose of the SRI index as:

- To identify companies listed on the JSE that integrate the principles of triple bottom line and good governance into their business activities.
- To provide a tool for a holistic assessment of a company's policies and practices against global and locally relevant corporate responsibility standards.
- To facilitate responsible investment by investors evaluating non-financial risk variables, since these risks may have the potential to have significant financial impacts.
- To aid in the development of responsible business practice in South Africa and other markets.

A study conducted by Botha (2015) performed an analysis on the water-related sustainability disclosure of JSE SRI constituents. This study found that there was a low level of comparability and consistency in the disclosure of the companies in their integrated reports. Another study, conducted by van Zyl (2015), investigated the level of disclosure of emissions by the top ten manufacturing companies in South Africa, and found that there was potential for improvement in the reporting of carbon emissions across the top ten manufacturing companies of the JSE. This was owing to the fact that there were inconsistencies in the reporting protocols of the selected companies. Koskela (2014) stated that there was a lack of research on occupational health and safety reporting as part of corporate social responsibility reports.

1.2 Problem statement

The companies listed as constituents of the 2017 JSE Responsible investment top 30 index were required to conform to certain criteria in terms of reporting on Environmental, Social, and Corporate Governance (ESG) performance or triple bottom-line reporting. For companies to qualify for inclusion on the index, they needed to meet the required number of indicators as set out by the requirements of the index for each area of measurement. The company's occupational health and safety performance figures — which give stakeholders an indication of the company's occupational health and safety risk profile — are included as part of the results which should be reported on.

Due to the fact that occupational health and safety reporting and disclosure is not mandatory, and that the reporting guidelines are open to interpretation, disclosure of occupational health and safety commitment and performance could mask practices which may be unacceptable to investors and stakeholders.

1.3 Objectives of the research

1.3.1 Main objective

The main objective of the study is to conduct an analysis on occupational health and safety disclosure of JSE socially responsible index constituents.

1.3.2 Secondary objectives

Literature objectives

- Study literature to gain an understanding of trends and developments in occupational health and safety reporting and disclosure.
- Study the GRI reporting guidelines, and other reporting frameworks, to gain an understanding of the standards for occupational health and safety reporting.
- Study literature to gain an understanding of integrated reporting and the requirements set for companies to be included on the JSE SRI index.
- Study literature to determine what the most effective method is for conducting an analysis on the occupational health and safety disclosure of the selected companies.

Empirical objectives

- Obtain the integrated annual reports and all related sustainability and safety reporting documentation for all of the constituents of the JSE SRI index for the 2016 reporting period.
- Compile a measuring instrument from literature to analyse the occupational health and safety disclosure of the selected companies.
- Use the measuring instrument, which was compiled from studying literature, as a means of measuring the occupational health and safety disclosure of the selected companies.
- Compare the occupational health and safety disclosure of the different sectors represented on the JSE SRI index.

1.4 Research methodology

For this study, both a literature review and an empirical analysis will be conducted. For the purpose of the empirical analysis, content analysis will be used as the method of analysis. The content analysis will be performed by using a measuring instrument developed from literature.

1.4.1 Literature study

The literature study was conducted on occupational health and safety reporting and disclosure, as well as on how this fits into integrated reporting and the JSE SRI index.

For the conducting of the literature study, literature involving sustainability reporting, occupational health and safety reporting, integrated reporting, and the JSE SRI index was used. The main sources of information was ScienceDirect, Google Scholar and EBSCOhost.

1.4.2 Empirical study

The empirical study was conducted using qualitative content analysis as the method of analysis. The measurement device used for the study was compiled from the GRI reporting guidelines. This allowed for a fair comparison to be made between the integrated reports of the different sectors represented on the JSE SRI index.

1.4.2.1 Population

The population selected for the study was all the companies who were constituents of the 2017 JSE SRI Top 30 Index. The integrated reports of these companies were used for the analysis. The sustainability and safety reports of companies were used for the analysis in the cases where these reports were made available in a public domain.

Table 1.1 lists all of the companies who are constituents of the 2017 JSE SRI Top 30 Index. The entire index was included in the study.

Table 1.1: Constituents of the JSE SRI index which were used for this study.

African Rainbow Minerals Ltd	Impala Platinum Hlds
Anglo American	Investec PLC
Anglo American Platinum	JSE
Anglogold Ashanti	Kumba Iron Ore
Barclays Africa Group Ltd	Life Healthcare Group Holdings
Barloworld	Massmart Holdings
BHP Billiton	Mondi Plc
British American Tobacco PLC	Nedbank Group
Clicks Group Ltd	Netcare
Compagnie Financiere Richemont AG	Sanlam
Distell Group Ltd	Sasol
EOH Holdings Ltd.	Standard Bank Group
Glencore	Truworths International
Gold Fields	Vodacom Group
Grindrod	Woolworths Holdings

Source: JSE (2017)

Limiting this study to the assessment of Environmental, Social, and Corporate Governance (ESG) reporting, as reported in annual reports, is justified by the fact that annual, safety and sustainability reports are considered to be important corporate governance and stakeholder documents which are produced by the companies as a means of communicating with investors and stakeholders. King II also emphasizes that integrated reporting is an important means of building the trust and confidence of corporate stakeholders (Marx & Van Dyk, 2010:83).

1.4.2.2 Sample

For the purpose of this study, the entire population of the 2014 JSE responsible investment top 30 index was studied.

1.4.2.3 Collection of data

The data which were used for this study consisted of the 2016 integrated reports and safety and sustainability reports of the companies which are constituents of the 2017 JSE SRI index. This is public data that are obtainable from the websites of the various companies, or from alternative sources of annual integrated reports.

1.4.2.4 Analysis of data

The integrated reports were analysed by means of a qualitative content analysis. The results of the content analysis were then grouped according to the sectors to which the selected companies belong. The results of different sectors were then compared to complete the analysis of the occupational health and safety disclosure of these companies.

1.5 Limitations of study

This study is limited in its scope to the companies listed on the JSE SRI index. For this reason, the findings do not represent the health and safety performance disclosure of non-SRI-listed companies, public sector institutions or unlisted entities.

This study is also limited due to the limitations associated with the use of content analysis — although content analysis is a widely accepted research instrument (Marx & Van Dyk, 2010:83), its use may lead to the capturing of an incomplete image of a company. Content analysis is further limited by being more focused on the quantity, rather than the quality, of disclosure (Unerman, 2000).

1.6 Conclusion

The study, which was undertaken with the purpose of analysing the occupational health and safety disclosure of companies which are constituents of the JSE SRI index, was undertaken to provide an important insight into the level of disclosure of these companies, especially when comparing different sectors which have different levels of exposure to occupational health and safety risks. Occupational health and safety disclosure can also give shareholders insight into the risk profile of a company in terms of incidents or working conditions which may cause harm to the employees of the company. Shareholders can then use this information to make informed decisions regarding the risk level associated with their investments.

2 Literature review

2.1 Occupational health and safety reporting

2.1.1 Background

Following the British Petroleum (BP) Deepwater Horizon incident, investors were highly critical of BP's annual report's occupational health and safety reporting, citing that the report had an insufficient level of detail. Details on how the company's risk and safety management had been reinforced, and how these systems were being evaluated and managed, seemed especially lacking (O'Neill *et al.*, 2016; Ethos, 2011). Following the BP incident, investors noted that, in this case, a lack of key performance indicators and benchmarks used to measure progress towards addressing risks, limit investors' ability to assess the effectiveness of the risk mitigating or reducing measures put in place by the company. For this reason, the board needs to create and implement sustainable and robust initiatives with consistent and regular public reporting that will enable shareholders to benchmark a company's performance and progress in terms of occupational health and safety (O'Neill *et al.*, 2016). Safety performance measurement provides information which can be used retrospectively for decision-making and for addressing different informational needs (United Kingdom Health and Safety Executive (HSE), 2001; Arezes & Miguel, 2003).

2.1.2 Background to occupational health and safety

The National Institute of Environmental Health Sciences (NIEHS, 2017) defines occupational health as "the identification and control of the risks arising from physical, chemical, and other workplace hazards in order to establish and maintain a safe and healthy working environment".

The losses that companies sustain due to occupational health and safety incidents are considerable, the loss for all companies due to work-related incidents being 5–10%. The ratio of the direct cost to the indirect costs of these incidents is 1:11, with indirect costs including material and product damage, loss of production time, overtime, legal costs, temporary labour , supervisors time, investigation time, fines, loss of morale, expertise and experience, and bad publicity (Yoon, Hsing, Chen, Choi & Rui, 2013).

The United Kingdom Health and Safety Executive (HSE, 2001) compiled a guide to measure health and safety performance within organizations. The guide argues that if

managing directors or chief executive officers (CEO's) were to be asked to measure their companies' performance, the likely result would be measures of indicators such as profit, return on investment and market share. The reports would rather focus on positive reflections, rather than negatives or failures. Similarly, if the same managing directors or CEO's would be asked to measure their companies' health and safety performance, this measure would be in terms of failures or injury statistics. However, reporting on a low injury or illness rate, even over several years, is no guarantee that the companies' operational risks are being controlled. For this reason, it is important for companies to recognize that there is no single measure of health and safety performance. Instead, a range of different measures, or a "balanced scorecard", is required. Such a balanced scorecard should then provide information on a range of different health and safety activities (Arezes & Miguel, 2003).

2.1.3 Occupational health and safety indicators in integrated reports

According to Marlin & Marlin (2003), corporate social responsibility reporting started in the 1970's and 1980's, where the focus was only on reporting the company's compliance to environmental management. In the 1990's, however, there was a paradigm shift to reporting on occupational health and safety performance.

Commonly, health and safety performance is reported by using negative measures such as lost time injuries, total injuries and lost work day rates, while some companies also report their level of compliance by citing the amount of penalties or fines which were received over the past year (O'Neill, Martinov-Bennie & Cheung, 2013). These results are referred to as lagging indicators, and are considered to be reactive (Hickey, 2017). Occupational health and safety reporting is, however, different from many other measurement areas owing to the fact that success is measured by the absence of an outcome. It is, however, important to note that a low accident or occupational disease rate is not a guarantee that risks are being controlled or that there will not be occupational injuries or diseases in the future. This is especially prominent in companies where the likelihood of an incident is low but major hazards are still present. Due to these facts, some companies report on more proactive measures of performance, which are commonly measurable activities such as the number of training courses, inspections or audits (Arezes & Miguel, 2003). These indicators are measured as leading safety indicators, which lend a proactive approach to safety management. Lagging indicators indicate what the performance of the company was, and leading

indicators indicate where the company is headed. If a leading indicator is identified as heading in the wrong direction, the company is still in a position to take action before an incident occurs (Hickey, 2017).

Typical indicators which are reported on by companies include recordable injury and illness (also referred to as total recordable incident rate (TRIR)), days away due to injury or illness (also referred to as absenteeism), occupational illness rate, fatality rate, and the total number of fatalities (ISN, 2013). TRIR refers to the recordable incident rate, which are incidents resulting in death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, loss of consciousness, significant injury, and illness which is diagnosed by a doctor or other licensed healthcare professional (OSHA, 2001). The International Labour Organization's (ILO, 2010) list of occupational diseases includes a list of internationally recognized occupational diseases, from respiratory and skin diseases and illnesses caused by biological, chemical or physical agents, to occupational cancer and musculoskeletal disorders. This list is used worldwide and these diseases are internationally accepted to be caused by work. The ILO's list of occupational diseases also covers occupational mental health disorders. The South African compensation for occupational injuries and diseases act (130 of 1993), however, does not include occupational mental health disorders as occupational diseases.

It is also important that the company's report should provide information on the company's occupational health and safety in terms of its risk state and the risk management systems and structures. The report should importantly report on the company's recent occupational health and safety performance, and should include the frequency and severity of incidents over the reporting period. This can be used to identify gaps in the risk management systems of the company and provide insight into the consequences of occupational incidents and illness (O'Neill *et al.*, 2016).

2.1.4 Occupational health and safety and sustainability reporting frameworks

Due to the growing importance for companies to report on more than economic performance, and stakeholders increasingly demanding more disclosures, some sustainability reporting tools have been developed (Waddock, 2003). One such tool is triple bottom-line reporting. Triple bottom-line reporting focuses on capturing a wide range of values and measures of a company's performance that span the three main

pillars of people (sustainability), profits (economy), and planet (environmental) (McWilliams, Parhankangas, Coupet, Welch & Barnum, 2016). This reporting makes it possible to present a company's results by reporting on performance and clarifying the relationships between goals, activities, inputs and outputs. These reports also act as important tools for decision-making and for comparing performance across different companies and sectors (Siew, 2015). Sustainability reporting tools make it possible for companies to report results by measuring progress, and to explain the links between activities, outputs, goals and outcomes (Singh, Murty, Gupta & Dikshit, 2009).

Siew (2015) states that sustainability reporting frameworks typically give companies guidelines, principles and initiatives which are formulated to assist companies in their disclosure efforts. The following sustainability reporting frameworks are commonly used for the purpose of compiling integrated reports:

- Global reporting initiative (GRI)
- Sigma project
- Drivers, Pressures, States, Impacts, responses (DPSIR) framework
- The Global Compact
- Carbon disclosure project
- World Business Council for Sustainable Development (WBCSD)
- Greenhouse gas protocol
- Broad principle-based frameworks

Marimon, Alonso-Almeida, del Pilar Rodriguez & Alejandro (2012) and Siew (2015) list the following standards which provide guidelines for sustainability reporting:

- AA 1000
- SA 8000
- ISO 14001
- ISO 9001
- ISO 26000
- AS/NZS 4801
- EMAS
- OHSAS 18001

These standards are similar to frameworks in terms of the guidance offered, but exist in the form of formal documentation that specify requirements, characteristics and specifications (Siew, 2015). These standards encourage companies to take corporate responsibility for social and environmental issues. There is, however, some overlap among some of these standards, even though each standard was compiled to satisfy a specific need of a stakeholder or group (Marimon *et al.*, 2012).

In addition to the FTSE4Good and Dow Jones sustainability indices mentioned earlier as tools which exist in the market to measure companies' sustainability performance, other indices and ratings exist (Siew 2015 ; JSE, 2014), such as:

- The (Kinder, Lydenberg & Domini) KLD global sustainability index.
- Ethical Investment Research Services (EIRIS) global sustainability rating.
- MSCI environmental, social and governance reporting.
- JSE SRI index.

Siew (2015), however, noted that these reporting tools have some deficiencies due to a lack of standardization, which makes it difficult to compare the results obtained from them. This makes it possible for companies to use these tools to hide their actual practices and manipulate stakeholders' perception through the use of "green-washing".

2.1.5 The Global Reporting Initiative (GRI)

The GRI is the most prominent of the sustainability reporting tools and has become a standard for sustainability reporting in South Africa (Labuschagne & Swartz, 2013: 3). The GRI is a network-based organization which has developed into the most widely used sustainability reporting framework in the world. The GRI is committed to continuously improving the framework and promoting its application across all countries (Brown *et al*., 2009). The GRI was founded by the Coalition for Environmentally Responsible Economies (CERES) in 1997, with the purpose of creating a sustainability reporting framework which would be globally applicable.

Since the first introduction of the GRI guidelines, there have been several revisions. The latest iteration is called G4, or the 4th generation of the GRI reporting guidelines, and was launched in May 2013. This was the result of two years of consultation and dialogue with experts from a wide variety of sectors. The goal of G4 is simply to "help

reporters prepare sustainability reports that matter – and to make robust and purposeful sustainability reporting standard practice" (GRI, 2017).

According to the GRI (2017b), the GRI reporting guidelines state that a typical report should include the following categories and sub-categories:

- Economic
- Environmental
- Social
    - Labour practices and decent work
    - Human rights
    - Society
    - Product responsibility

Alonso-Almeida, Llach & Marimon (2014) stated that there has been a year-on-year increase in corporations using the GRI framework and, before that, Chester & Woofter (2005) reported on this occurrence, stating that the increased use is due to the following reasons:

- Using the GRI framework may lead to a significant reduction in time and effort spent in responding to requests for specific social and environmental performance information. This is confirmed by Nikolaeva & Bicho (2011) who stated that media and competitor pressures, combined with CSR media visibility, are important factors which lead to companies adopting the GRI framework (Siew, 2015).
- Studies by Stratos (2003), SustainAbility (2002) and SustainAbility, Standar & Poors & UNEP (2004) have shown that reports which were compiled using the GRI framework are superior to reports which were compiled without making use of this framework.
- On average, companies who report using the GRI framework have lower share price volatility and better financial margins. This is also possibly due to lower cost of equity and more accurate forecasts due to more transparency.

Alonso-Almeida *et al.* (2014) also states that the financial and energy sectors are the sectors that lead the adoption of GRI in their reporting,and have played a leading role in the diffusion of the GRI framework to other sectors. These two sectors, however, have

different reasons for adopting the GRI framework —Alonso-Almeida *et al.* (2014) states that the financial sector adopted the GRI framework due to the fact that the image of this sector has suffered during the recent financial crisis where this sector was accused of a lack of transparency. In contrast, the energy sector has acquired the reputation of being a “dirty” sector.

2.1.5.1 The process for defining reporting content according to the GRI.

The GRI guidelines advise that companies should apply the concept of materiality to determine the contents of integrated reports. According to King IV (2016), materiality is a threshold against which information is measured to determine whether it should be reported. If an item has a high enough importance, and has sufficient impact which could affect assessments of the company or decisions of the management of the company, it is seen as being material.

Applying the concept of materiality to non-financial reporting is even more difficult than applying this concept to financial reporting. This is due to the fact that financial reporting seeks to capture a broader concept of value creation (Lai, Melloni & Stacchezzini, 2017). Even quantifying the impact of events does not make it possible to establish unique thresholds, since these events may impact a range of different types of financial as well as non-financial capital. Non-financial information is also often not quantifiable, although these events may affect long-term value creation but may be due to other factors which are affected which are not used as measurements of the threshold (Mio, 2013).

The GRI guidelines states that materialty reflects a company’s significant environmental, social and economic impacts, combined with their influence on stakeholders’ decisions and assessments (GRI, 2017b).

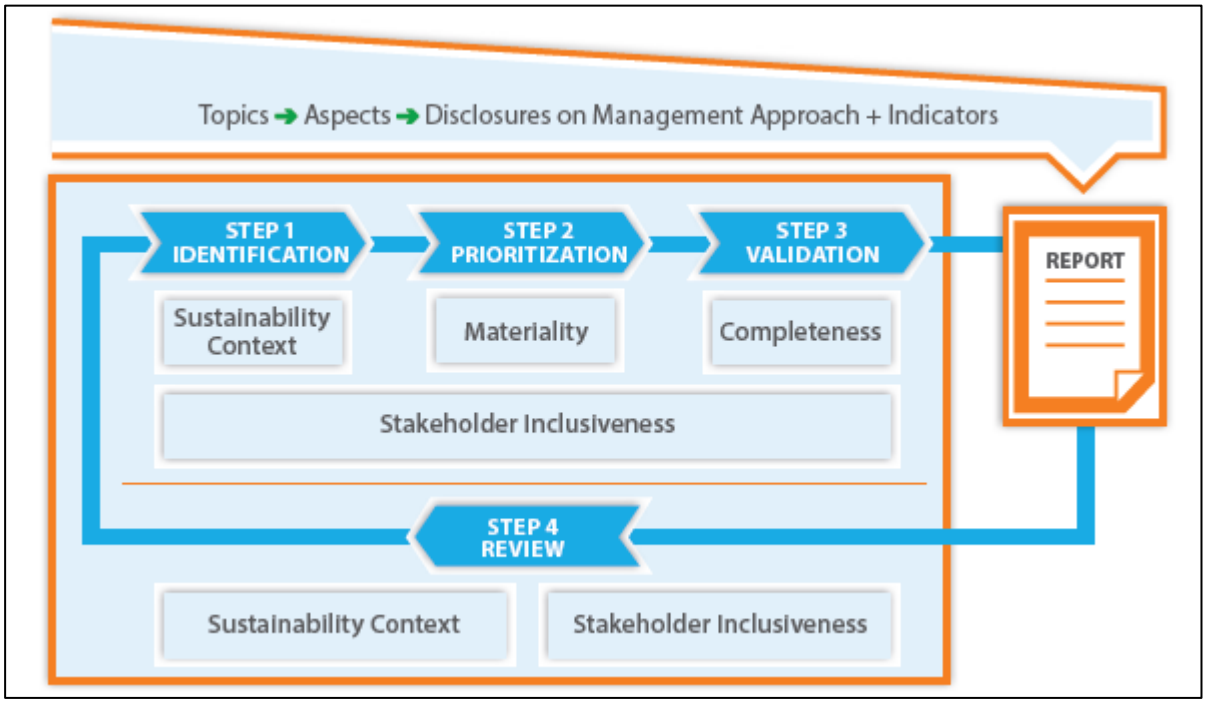
According to the GRI (2017b), the process of defining materiality and stakeholder inclusiveness consists of 4 steps:

1. Identification
    - Identify aspects and relevant topics.
    - Consider the aspects included in the GRI guidelines.
    - Identify where these impacts occur.
    - Determine the boundaries of the relevant topics and aspects.

2. Prioritization
    - Apply the principles of materiality to the topics and aspects which were identified in terms of the significance of the aspects and topics with regard to the company's economic, social impacts.
    - Compile a list of material aspects, with their associated level of coverage and boundaries, to be included in the report.
3. Validation
    - Apply the principles of completeness with regard to the inclusiveness of stakeholders.
    - Convert the identified material aspects into standard disclosures.
    - Determine the availability of information and account for the information which is not available.
4. Review
    - Apply the principles of sustainability context with regard to stakeholder engagement.
    - Review the aspects which were considered to be material in the last reporting period.

The relationship between these steps is shown in Figure 2.1.

Figure 2.1: An overview of the process of defining material aspects and boundaries of reporting



Source: GRI 2015

The process that companies follow to determine whether aspects are material has an impact on which matters these companies report on. This process will yield different results for different companies based on their economic, environmental and social environment. This could lead to variations in terms of the material aspects within sectors —different companies which form part of the same sector may report differently based on the results of the materiality analysis method followed, as well as the environment within which these companies operate. The decision regarding the materiality of an aspect can also be affected by stakeholders —they can demand that a company should include a certain aspect into their report if they have a particular requirement for the reporting of this aspect. For these reasons, it is important to measure whether companies consider occupational health and safety to be a material risk to the company.

2.1.6 The GRI guidelines and occupational health and safety reporting

Under the GRI's G4 guidelines' (2015) occupational health and safety aspect, there are four indicators which are recommended to be reported on. These indicators are listed in Table 2.1.

Table 2.1: The GRI G4 guidelines' occupational health and safety indicators

Indicator	Description of indicator
G4-LA5	"Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs."
G4-LA6	"Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender."
G4-LA7	"Workers with high incidence or high risk of diseases related to their occupation."
G4-LA8	"Health and safety topics covered in formal agreements with trade unions"

Source: GRI 2015

2.2 Integrated reports

2.2.1 Background to integrated reporting

Integrated reporting is used by companies to report annually on their financial and non-financial performance (Solomon & Maroun, 2012). The Integrated Reporting Council of South Africa (IRC SA) stated that an integrated report is a means of telling the overall story of an organization. It reports to stakeholders on the strategy, activities and performance of an organization in such a way that it allows stakeholders to be able to assess the overall ability of an organization to create and sustain value. Effective integrated reports reflect that an organization's ability to create and sustain value is based on economic, financial, social and environmental systems, as well as on the quality of its relationship with its stakeholders (Deloitte, 2012).

The International Integrated Reporting Council (IIRC) (2013), states that integrated reporting combines information about an organisation's strategy, performance, prospects and governance in such a way as to reflect the organisation's commercial, environmental and social environment within which it operates. This provides a concise and clear indication of how the organization demonstrates stewardship, and how the organization creates lasting value. The integrated report combines elements which are already being reported separately, such as financial, governance and remuneration, sustainability and management commentary. Importantly, integrated reporting should clearly indicate the connections between these elements, and explain how these elements affect the ability of the organization to create and sustain value in the long run (Deloitte, 2012).

Eccles, Cheng & Saltzman (2010) and Adams (2013) stated that integrated reports should report on the following:

- Intellectual capital
- Natural capital
- Financial capital
- Organizational capital
- Human capital
- Social and relationship capital

For the purpose of this study, the focus will be on organizational capital, which covers the procedures and systems that allow a company to achieve increasingly higher levels of productivity. Included in this is the performance of occupational health and safety systems, the listing of sustainability-related codes and norms which are being implemented in the company, and reports on social compliance audits in the company and in the supply chain (Eccles *et al.,* 2010).

2.2.2 The IIRC framework and the GRI guidelines

In 2011, the IIRC developed an internationally accepted integrated reporting framework to bring together "material information about an organization's strategy, governance, performance and prospects in a way that reflects the commercial, social and environmental context within which it operates" (Solomon & Maroun, 2012). This fundamental change in the way in which companies report, requires companies to focus not only on the report, but also on understanding all of the links in the business value creation chain. It allows stakeholders to understand the risks that area associated with a company's strategies (PWC, 2015).

The significant differences between the previously discussed GRI reporting guidelines and the IIRC reporting framework is shown in Table 2.2.

Table 2.2: Comparison between the GRI reporting guidelines and the IIRC reporting framework.

GRI	**IIRC**
Stakeholder inclusiveness principle The organisation should identify its stakeholders, and explain how it has responded to their reasonable expectations and interests.	**Stakeholder relationships** An integrated report should provide insight into the nature and quality of the organisation's relationships with its key stakeholders, including how, and to what extent, the organisation understands, takes into account, and responds to their legitimate needs and interests.
Materiality principle The report should cover aspects that: reflect	**Materiality** An integrated report should disclose

the organisation's significant economic, environmental, and social impacts; or substantively influence the assessments and decisions of stakeholders.	information about matters that substantively affect the organisation's ability to create value over the short, medium, and long term.
Comparability principle The organisation should select, compile, and report information consistently — the reported information should be presented in a manner that enables stakeholders to analyse changes in the organisation's performance over time, and that could support analysis relative to other organisations.	**Consistency and comparability** The information in an integrated report should be presented on a basis that is consistent over time, and in a way that enables comparison with other organisations to the extent which it is material to the organisation's own ability to create value over time.
Sustainability context Principle	**Connectivity of information** An integrated report should show a holistic picture of the combination, interrelatedness and dependencies between the factors that affect the organisation's ability to create value over time

Source: Mio (2016)

One of the key differences between the IIRC reporting framework and the GRI reporting guidelines lies in the definition of stakeholder relations, and in the different methods of identifying the recipients of the report: the GRI states that companies need to identify stakeholders who will probably use the report in their decision-making process. In contrast, the IIRC states that companies should focus on the stakeholders that the company believes to be fundamental in the creation of value,which results in a more narrow selection of stakeholders (Mio, 2016).

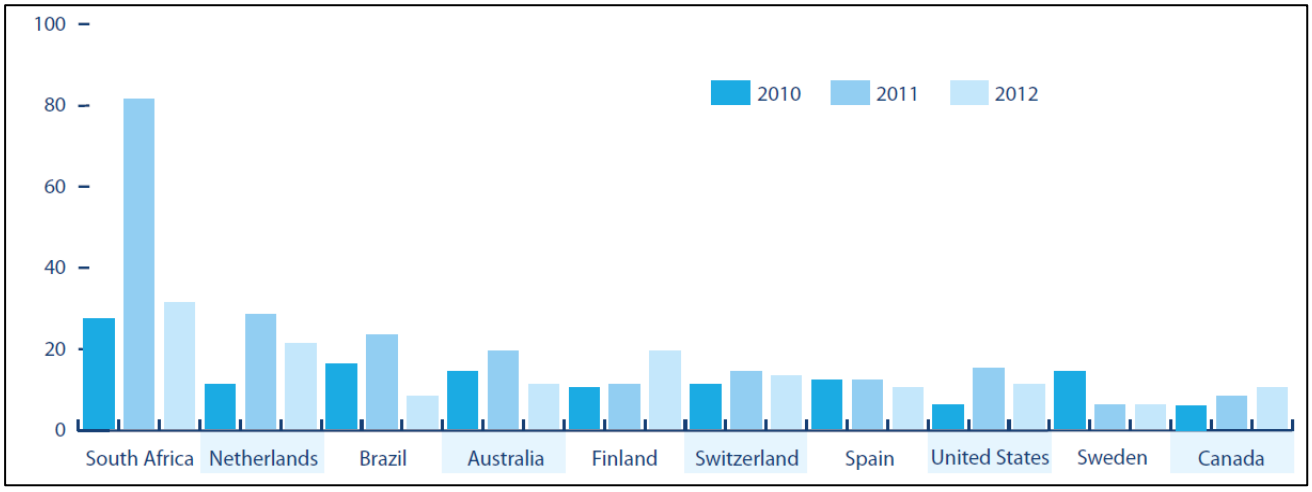
Mio (2016) further states that comparing the IIRC framework with the GRI guidelines shows the IIRC framework to be more closely linked to financial reporting than sustainability reporting. Therefore, Mio (2016) states that the GRI guidelines should be considered to be an evolution of the IIRC framework. For this reason, the emphasis of this study will be on the requirements set by the GRI guidelines.

In South Africa, integrated reporting has been a requirement stated by the King III Code on corporate governance in South Africa since 2010. King IV describes an integrated report as “A concise communication about how an organization’s strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value in the short, medium and long term”. King IV (2016) is the latest in a series of reports with King I (1994), King II (2002) and King III (2009) being its predecessors. King III was applied to all public, private and non-profit entities since March 2010, and King IV since November 2016. South African law has also changed to embody many of the principles set out in the King Code, with King II being embodied in the Companies Act (71 of 2008), and King III in the Public Finance Management Act (29 of 1999) and the Promotion of Access to Information Act (54 of 2002) (GRI, 2013).

2.2.3 South African integrated reporting performance

According to a 2013 study conducted by the GRI, South Africa is a leading country in the field of integrated reporting. The other pioneers in this field are the Netherlands, Brazil, Australia and Finland (GRI, 2013). Figure 2.2 shows South Africa’s performance, in terms of the number of integrated reports published between 2010 and 2013, compared to other countries.

Figure 2.2: Top 10 countries publishing self-declared integrated reports, listed according to the number of reports.



Source: GRI (2013)

From the graph shown in Figure 2.2, it is clear that South Africa has been a leader in the field of integrated reporting since 2010. This is likely attributable to the mandatory publication of integrated reports under the King III code (GRI, 2013).

90% of the published integrated reports in South Africa were published by large, private multinational companies. The single largest contribution of integrated reports was by the mining sector (19%), followed closely by the financial sector (18%). Retail, construction and telecommunication sectors each contributed around 10%. State-owned companies, non-profit organizations and public institutions each only contributed small percentages (2%) to the total (GRI, 2013).

2.3 The JSE SRI index

2.3.1 Background

According to Maubane *et al.* (2014), the JSE SRI index was launched in 2004 as South Africa's standard that is used for sustainability reporting. The JSE SRI is regarded as a rating tool used by investors to:

- Offer alignment with international standards such as the GRI, taking into account the complex nature of social responsibility in South Africa.
- Offer progressive criteria which evolves with the on-going development of ESG reporting.
- Offer an annual review of companies' performance, reporting, policies and management systems.
- Contribute to development of business practices that are sustainable in South Africa and abroad.

The JSE SRI index's philosophy is built on the three pillars that the triple bottom-line comprises — environmental, social and economic sustainability. These concepts are furthermore underpinned by good corporate governance principles. The index indicators encapsulate these three concepts in conjunction with the companies' response to climate change (JSE, 2014).

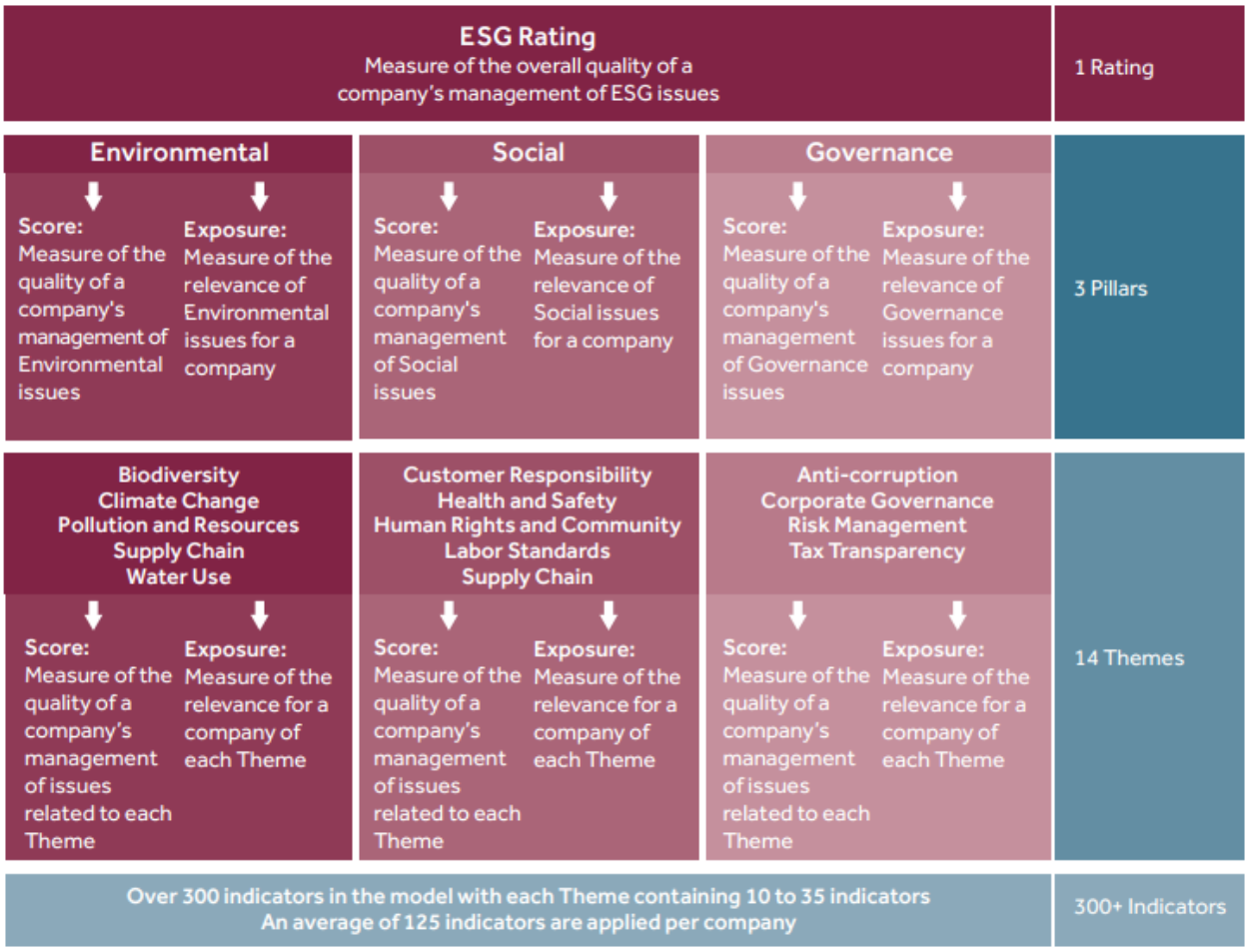
The JSE SRI index was changed in October 2015 to the Financial Times and the London Stock Exchange (FTSE)/JSE Responsible Investment Top 30 Index (JSE, 2017a).

2.3.2 Index inclusion criteria

Updated inclusion criteria for inclusion in the JSE Responsible Investment Top 30 Index was published in September 2017. This criteria states that for companies to be included in the index they have to have a FTSE ESG rating of 2.5 or higher (JSE, 2017b).

The FTSE ESG rating is calculated using a model (shown in Figure 2.3) which was compiled by FTSE Russell, an international provider of analytics, benchmarking and data analysis solutions for use by investors (FTSE Russell, 2016).

Figure 2.3: The FTSE Russell ESG rating data structure.



Source: FTSE Russell (2016)

According to the FTSE Russell ESG ratings and data model product overview (2016), the ESG ratings model provides insight into a company's management of, and exposure to, ESG issues across multiple dimensions. The ESG ratings comprise underlying pillars, thematic scores and exposures that lead to an overall rating. 300 different individual indicator assessments are built into the pillars and themes which apply to each company's unique circumstances. According to FTSE Russell (2016), this

approach emphasizes materiality, since it allows users to identify the issues which are most relevant to the company. A company's scores are calculated by making use of an exposure-weighted average, which means that the most material issues are given the most weight. The data model and the four levels of ESG ratings are made available on an online platform where companies and investors can use public information to determine the rating of a selected company.

2.4 Critical review of literature

From the literature studied, it can be concluded that the reporting practices of companies worldwide has changed drastically over the past 20 years, with companies increasingly working on increasing the quality of their disclosure of non-financial performance. This disclosure has largely been driven by stakeholders insisting on more transparency from large companies. A key metric which forms part of the non-financial reporting of companies is occupational health and safety.

In order for companies to improve their non-financial performance reporting, companies have been using sustainability reporting tools. The most prominent of these tools is the GRI sustainability reporting guidelines. These guidelines offer a means of reporting effectively on metrics such as occupational health and safety, and provide significant benefits to both the companies making use of the guidelines, as well as to the stakeholders of these companies.

Making use of the GRI guidelines as a guide to measure the occupational health and safety disclosure of the companies which are constituents of the JSE SRI index is appropriate, since many of these companies use the GRI guidelines to report their non-financial performance. The GRI guidelines also incorporate the concept of materiality as a key element, which allows for the use of these guidelines as a source of codes to be used during the empirical analysis of integrated reports.

3 Research methodology

3.1 Research method

In all forms of research it is important to start by clarifying what data the researcher wants to obtain, as well as how and from whom. The purpose of the study could be of an exploratory or descriptive nature, based on deductive or inductive reasoning (Bengtsson, 2016). Inductive reasoning is used to draw conclusions from collected data by developing theories from new information, following a “bottom-up”, data-driven approach (McAbee, Landis & Burke, 2017). Text is analysed with an open mind, with the intention of identifying meaningful subjects which are used to answer the research question (Bengtsson, 2016). In deductive reasoning, data are analysed against concepts which are identified before the analysis of the data is commenced. These concepts can typically be obtained through a rigorous literature review. This is typically referred to as a “top-down”, theory-driven approach (Bengtsson, 2016; McAbee, *et al.*, 2017). The study presented here — an analysis of the occupational health and safety disclosure of the companies which are constituents of the JSE Responsible Investment Top 30 Index — is a deductive study.

3.1.1 Methods of analysing integrated reports

In order to be able to perform accurate and worthwile analyses of company reports, the correct tools for data collection and analysis is required. According to Gray and Milne (2015), there is no singularly superior research approach.However, it is necessary for the researcher to utilize the most appropriate technique which follows a methodological approach (Aureli, 2017; Bryman & Bell, 2015). The most common technique utilized in business and accounting studies to analyse social, environmental and economic information, is content analysis (Aureli, 2017; Krippendorff, 2004).

3.1.2 Content analysis

Content analysis is a systematic and replicable technique which can be used to compress many words of text into fewer content categories which are based on explicit coding rules (Ahmed & Sargent, 2014 ; Stieglitz & Dang-Xuan, 2013).

Stemler (2001) also states that content analysis allows researchers to analyse large volumes of data with greater ease, by using a systematic approach. This technique is also useful for discovering and describing the focus of an individual, an institution or a

group. Content analysis is typically used in accounting research to give insight into accounting practices (Steenkamp & Northcott, 2007). Content analysis is also regarded as being a flexible method for analysing textual data (Cavanagh, 1997). Content analysis, however, consists of several different approaches which range from intuitive, impressionistic or interpretive analysis to strict textual or systematic analysis (Rosengren, 1981). Although content analysis is broadly either classified as qualitative or quantitative (Hsieh & Shannon, 2005), there are various different terms which are subsumed under content analysis, including content analysis, systematic content analysis, statement analysis, field of meaning analysis, meaning analysis, quantitative content analysis, qualitative content analysis, and hermeneutic content analysis (Bos & Tarnai, 1999).

Krippendorff (2004) states that there are six questions which need to be addressed when conducting a content analysis:

1) Which data are analysed?
2) How are they defined?
3) What is the population from which they are drawn?
4) What is the context relative to which the data are analysed?
5) What are the boundaries of the analysis?
6) What is the target of the inferences?

A study by Aureli (2017) compared content analysis to the method of text mining. In this study, both text mining and content analysis were used to analyse the social and environmental reports of four large multinational companies in terms of their corporate social responsibility disclosure. It was found that these two methods are not irreconcilable, and may lead to different conclusions regarding a company's behaviour. The study concludes that these two methods should not be used to crosscheck results, even though they deliver similar output data.

3.1.3 Qualitative research

Qualitative content analysis is a common method among numerous research methods which are used to analyse textual data (Hsieh & Shannon, 2005). Qualitative research is used to obtain a better understanding of the human condition in different contexts of a perceived situation. Even though no studies are perfect, it is necessary for researchers to create the best studies possible through accurate and considerate planning. This

planning should be done based on existing circumstances by identifying all available resources and mapping external resources, including economics, potential informants and time, since some data collection and analysis methods are time-consuming and costly. When conducting qualitative research, there are multiple methods that can be used, including phenomenology, ethnography, phenomenographic, hermeneutics, grounded theory and content analysis (Bradbury-Jones, Breckenridge, Clark, Herber, Wagstaff & Taylor, 2016). An important difference between qualitative and quantitative research is that qualitative research is not linked to any particular science and, for this reason, there are fewer rules to follow. However, some rules which are used in quantitative analysis can be used in content analysis, which add a level of credibility to this qualitative research method (Bengtsson, 2016).

3.1.4 Quantitative content analysis

Quantitative research methods are those that deal with numbers and data which are measurable in a systematic method of investigation of phenomena and their associated relationships. It is also used to answer questions relating to relationships between measurable variables with the intention to predict, explain or control phenomena (Leedy, 1993). Quantitative analyses are usually performed with the purpose of confirming or disproving hypotheses. To do this, one or more variables are selected and used in the research, and data related to the selected variables are then analysed with the application of descriptive or inferential statistics (Kumar, 2005).

Quantitative content analysis is a technique for the objective and systematic quantitative description of the manifest content of communication. This process includes the segmentation of communication into smaller units, assigning each of these units to a category and assigning tallies to each categories (Rourke & Anderson, 2004).

3.1.5 Qualitative content analysis

Qualitative content analysis focuses on the characteristics of language as a communication method, with particular emphasis on the contextual meaning or content of the text. Textual data could either be in electronic, print or verbal form, and could have been obtained from open-ended survey questions, interviews, narrative responses, focus groups, or print media such as manuals, books or articles. Qualitative content analysis involves more than just counting words, by examining the use of language more intensely for the purpose of being able to classify large amounts of text

into a smaller quantity of categories which represent similar meanings. The general purpose of qualitative content analysis is to gain an understanding and knowledge of the phenomenon which is being studied (Hsieh & Shannon, 2005).

Kaid (1989) lists seven key activities which form part of qualitive content analysis:

1. Formulating the research questions to be answered
2. Selecting the samples to be analysed
3. Defining the categories to be applied
4. Outlining the coding process
5. Coder training
6. Implementing the coding process
7. Analysing the results of the coding process

When these steps are applied, the success of the qualitative analysis is greatly dependent on the coding process. The basic action of the coding process is to organize large quantities of text into fewer categories of content (Caunt, Franklin, Brodaty & Brodaty, 2012). These categories can be directly taken from the text, or derived from the text through analysis. Relationships can then be identified among these categories. After these relationships have been identified, a coding scheme is developed to guide coders to make decisions during the analysis of the content. The coding scheme is a device which organizes data into the identified categories. This coding scheme also includes the process and pre-set rules of the content analysis, and is set up in a systematic and logical way to give a scientific result (Hsieh & Shannon, 2005).

Hsieh & Shannon (2005) states that there are three approaches which can be followed to perform qualitative content analysis — conventional, directed and summative. The key differences between these approaches are the means in which the initial codes are developed. For conventional content analysis, categories are determined during data analysis. This approach allows the researcher to obtain a richer understanding of the phenomenon. In directed content analysis, the researcher uses prior research or prior theories to develop the initial coding scheme. This is done before the start of the analysis of the content. Throughout the analysis, additional codes are developed and the initial coding scheme is revised A directed approach thus allows for the refining or revision of existing theories. A summative approach is different from the other methods, since text is analysed by looking at single words or particular content. This approach

allows for the analysis of patterns to interpret the contextual meaning of specific content. Table 3.1 shows the major differences between the three approaches to content analysis by comparing what the study starts with, the timing of defining codes or keywords and the source of codes or keywords.

Table 3.1: Major coding differences among the three approaches to content analysis.

Type of content analysis	Study starts with	Timing of defining codes or keywords	Source of codes or keywords
Conventional content analysis	Observation	Codes are defined during data analysis	Codes are derived from data
Directed content analysis	Theory	Codes are defined before and during data analysis	Codes are derived from theory or relevant research findings
Summative content analysis	Keywords	Codes are defined before and during data analysis	Keywords are derived from interest of researchers or review of literature

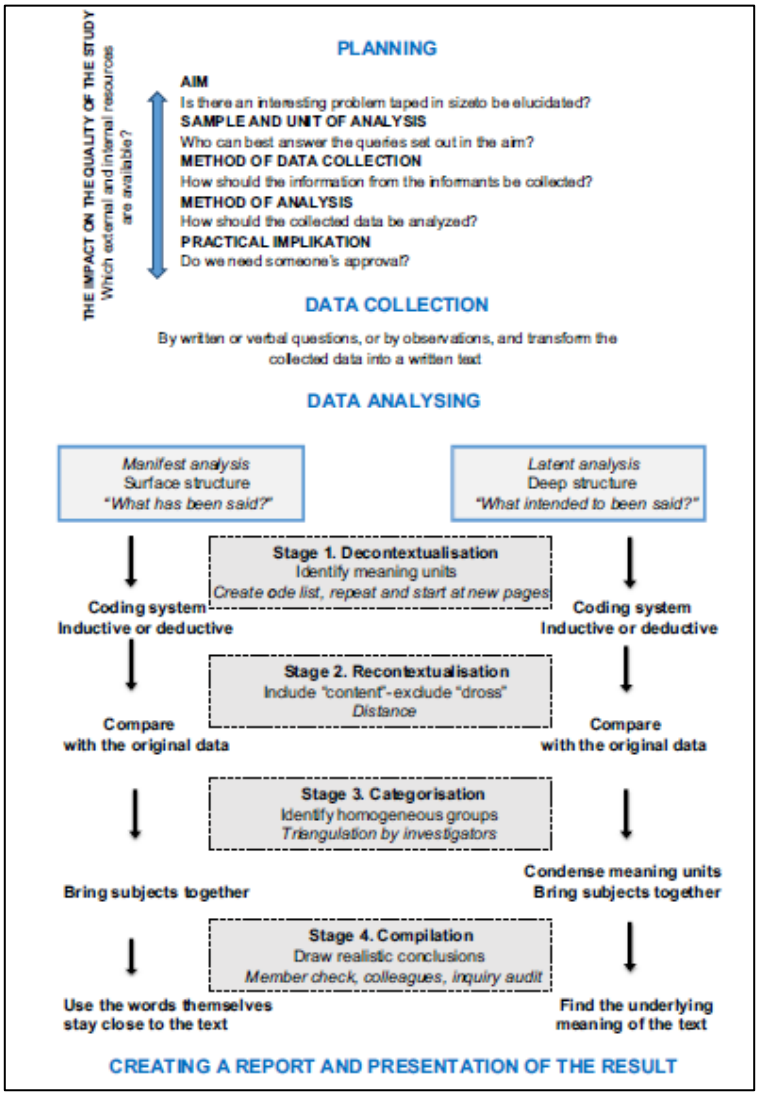
Source: Hsieh & Shannon (2005:1286)

3.1.6 Content analysis process

Figure 3.1 shows the progression of a typical qaulitative content analysis process, with the main steps:

- Planning
- Data collection
- Data analysis
- Creating a report and presentation of the result

Figure 3.1: An overview of a qualitative content analysis process from planning to presentation.



Source: Bengtsson (2016).

After a study has been initiated, the next step is to establish a study design. The five issues which need to be considered during the planning process are: “the aim, the sample and unit of analysis, the choice of data collection method, the choice of analysis method and the practical implications” (Bengtsson, 2016). The first step of the planning process is the establishment of the aim, which then determines the structure and boundaries.of the study. If the aim of the investigation is too broad, the risk of studying too many aspects may prevent the researcher from reaching the desired depth of study of the subject. Even if it is possible to handle the large amount of data, difficulties often still arise when the purpose of the study is too broad (Morse & Richards, 2002). When conducting qualitative analyses, it is important for the data to be based on between 1 and 30 informants (Fridlund & Hildingh, 2000). The sample size should, however, be

determined on the basis of informational needs to allow for the research question to be answered with sufficient confidence. Next, the researcher needs to determine whether the data are to be analysed in its entirety, or whether it should be split into smaller parts. The researcher can use the aim that needs to be achieved as a guide to determine how the analyses should be conducted (Patton, 2002). It should, however, be noted that Bengtsson (2016) states that “there are not established criteria when using content analysis for the size of a unit of analysis, neither the number of informants or objects to study, nor the number of pages based on the informants’ own written text or transcribed data”.

According to Guthrie & Abeysekera (2006), sentences are the suggested unit of analysis for SER (social environmental reporting). The use of sentences for coding as well as measurement is likely to result in complete, meaningful and reliable data for further analysis. It is also possible to use paragraphs, since paragraphs are more appropriate than word count when drawing inferences from narrative statements. The choice of data collection method has an impact on the depth of the analysis, but content analysis can be used on all types of written texts, no matter from where the material originates. Some forms of data do, however, offer the researcher more insight than others (Bengtsson, 2016).

3.1.7 Choice of either qualitative or quantitative content analysis as method

Content analysis has both a qualitative and a qualitative method which can be used in either a deductive or an inductive way. In quantitative research, facts from the text are presented on the basis of frequency, expressed as actual numbers or percentages of key categories. In qualitative content analysis, the researcher attempts to reflect the statements of the informant about a certain subject. Qualitative content analysis presents data in words or themes which makes it possible to interpret the results. The researcher has to make the decision whether the analysis is to be a manifest analysis or a latent analysis. Manifest analyses report directly on what the informants say, by focusing on the visible and obvious parts of the text. Latent analysis, in contrast, is a more interpretive method which seeks to find the underlying meaning of the text (Bengtsson, 2016).

3.1.8 Reliability and validity of content analysis

It is important to demonstrate reliability of the instruments used and/or the reliability of the data collected when making use of content analysis. This permits replicable and valid inferences to be drawn from the findings of the study (Guthrie & Abeysekera, 2006:121). Guthrie & Abeysekera (2006) states that there are two separate issues to consider when determining the reliability of content analysis:

- First, it is important to attest that the coded data which were produced from the content analysis is reliable. This can be achieved by using multiple coders and by ensuring that the descrepencies between the coders are minimal.
- The second factor is the reliability which is associated with the coding instrument used. Establishing the reliability of the employed coding tools reduces the need for multiple coders.

Furthermore, there are three types of reliability of content analysis — stability, reproducibility, and accuracy. The three associated methods, listed by Guthrie & Abeysekera (2006:121) for ensuring the reliability of the content analysis, especially concerning the level of disclosure, are:

- Selecting disclosure categories which are well-grounded in literature.
- Establishing a coding instrument which has well-specified decision categories and decision rules.
- Training the coders and showing that the coding decisions which have been made on a coding sample had reached an acceptable level.

3.1.9 Summary of research method study

The research conducted to determine which research method is ideal for the purpose of conducting an analysis of occupational health and safety disclosure of a selected population of companies, has shown that content analysis is the ideal method to use for this purpose. This is a proven method for conducting business and accounting studies, and is also the most common technique used for the analysis of economic, environmental and social information (Aureli, 2017). This method has been used to analyse the disclosure of companies on items proposed by international reporting guidelines and standards such as the GRI guidelines (Aureli, 2017; Roca & Searcy, 2012; Tewari & Dave, 2012).

The use of both a quantitative and qualitative approach in the content analysis is a similar approach to that employed by Botha (2015), Siew (2014) and Van Zyl (2015), who conducted analyses on the disclosure and effectiveness of sustainability reporting tools. This approach allows for an analysis into the disclosure content related to occupational health and safety of the selected companies, as well as to effectively compare the companies in terms of their level of disclosure.

3.2 Description of overall research design

This study, which was performed to analyse the occupational health and safety disclosure of the JSE SRI constituents, was an empirical study. The study used both a qualitative and quantitative approach to analyse the content of the selected companies' integrated and related reports. A qualitative analysis of the integrated reports, to analyse the occupational health and safety disclosure of these companies. The results of the qualitative content analysis was used to compile thematic questions which were used in the quantitative content analysis. A quantitative content analysis was done on the reports using questions, which were both obtained from literature and the qualitative content analysis.

3.3 Population

For the purpose of this study, a particular population of companies was studied. The entire selected population was studied to understand the complete trend of these companies, especially since they were from different sectors, and had distinctively different operational risks that affect occupational health and safety. It is therefore important to note that the purpose of this study was to gain an overall indication of the trend of occupational health and safety of all the companies that were part of the population.

As stated in previous chapters, all the companies that were constituents of the JSE SRI index were selected as the population to be used in this study,. These companies represent different sectors, namely:

- Hospital management & long-term care
- Telecommunication services
- Investment services
- Mining

- Banking
- General industrials
- Retailers
- Food & drug retailers

The full list of companies covered in this study is shown in Table 1.1.

3.4 Data collection

The study was done on the constituents of the FTSE/JSE Responsible Investment Index Top 30. The annual integrated reports of these companies, as well as supplementary reports, such as GRI checklists and sustainability reports are available on the websites of these companies.. All of the information used to conduct this study was public information which included, but was not limited to, the annual integrated reports, sustainability reports and GRI checklists of the companies studied. All of the reports used in this study were obtained in PDF format and were analysed in “soft” copy.

The main sources of data used in this study were:

- The websites of the various companies included in the studied population.
- Various other reputable websites that offer the integrated reports of listed companies for download.

3.5 Data analysis

3.5.1 Content analysis

For the qualitative content analysis, the conventional content analysis method was used. During this content analysis, the reports of the companies in the population were studied to expand on the thematic codes which were used during the quantitative content analysis. The reports were studied for details regarding their disclosure of occupational health and safety, with the aim of determining what information, regarding occupational health and safety, the companies disclose.

The process followed for the qualitative content analysis consisted of decontextualization, recontextualization, categorization and compilation:

During the decontextualisation phase, the integrated reports were analysed to obtain the code used for the rest of the content analysis. This involved the identification of keywords from the content. The next step was recontextualisation, which involved studying the context in which these words were used in the content. During categorization, the codes were categorized into homogeneous groups for the purpose of improved analysis of the content. The final compilation step involved the compilation of the complete results, with the codes categorized correctly, to gain insight into the disclosure patterns of the sample group.

Thematic codes were then compiled from the qualitative content analysis, and used during the quantitative content analysis. Additional thematic codes, regarding the recommended occupational health and safety disclosure, were derived from the G4 GRI guidelines.

3.5.2 Content analysis thematic codes

The codes used to conduct the content analysis was in the form of questions obtained from the G4 GRI guidelines, and from the contents of the reports of the companies studied.

3.5.2.1 GRI guidelines with regard to occupational health and safety

The GRI's G4 sustainability reporting guidelines' (2015) occupational health and safety reporting indicators are shown in Table 2.1. These 4 aspects can effectively be integrated into the codes used during the quantitative content analysis by transcribing these guidelines into questions.

The concept of materiality, which forms a central part of the method of defining the reporting content, can be further integrated into the content analysis codes.

3.5.2.2 Codes to be used during quantitative content analysis

The codes used to conduct the content analysis were compiled using the GRI guidelines, as well as the contents of the integrated reports studied. The codes (questions) are shown in Table 3.2. The questions marked in grey in the table are those which were compiled based on the GRI guidelines, and the questions not marked in grey were compiled by performing a qualitative content analysis. The qualitative content analysis found that some items were commonly reported on in some reports. These

items were then included in the study to measure whether all of the companies disclose these items.

Table 3.2: Questions used during the content analysis

(Questions marked in grey are questions complied from the GRI reporting guidelines).

Does the company disclose the director or senior manager responsible for occupational health and safety?
Does the company disclose (Occupational Health and Safety Assessment Series) OHSAS 18 001 compliance?
Does the company disclose Occupational health and safety act (86:1993) compliance?
Does the company disclose that it conducts external occupational health and safety audits?
Does the company regard occupational health and safety as a material risk?
Does the company disclose TRIR (Total recordable incident rate)? (G4-LA6)
Does the company disclose occupational illness rate? (G4-LA6)
Does the company disclose occupational fatalities? (G4-LA6)
Does the company disclose the percentage of the total workforce represented in formal joint management (Worker health and safety committees)? (G4-LA5)
Does the company disclose the level of absenteeism among workers? (G4-LA6)
Does the company report on whether there are workers who have a high incidence or high risk of specific diseases associated with their occupational activities? (G4-LA7)
Does the company report on health and safety topics which are covered in formal agreements with trade unions? (G4-LA8)
Does the company make use of a GRI checklist?

Does the company have a separate sustainability report?

3.6 Research ethics

Due to the nature of the study, all the information used was obtained from public sources. This information included the integrated reports and other public occupational health and safety reports of the JSE SRI index constituents.

The study specifically looked at the occupational health and safety disclosure as published by the JSE SRI constituents. Due to the nature of occupational health and safety, the companies may have reported on serious incidents and injuries, as well as fatalities. The companies may also have reported on occupational health issues experienced by their employees.

The information published in these reports may or may not have included specifics regarding these injuries, illnesses and fatalities. For the purpose of this study, however, the specifics of these incidents were not used. Incidents were purely viewed as statistics.

4 Results and discussion

The results of the content analysis, which was conducted on the integrated and sustainability reports, as well as the GRI checklists, of the companies studied, was tabulated and scored according to the number of positive responses to the thematic codes described in chapter 3.

There was a total of 12 measurement questions against which the companies were scored. A percentage was then awarded to the companies based on the number of positive responses out of a maximum of 12.

4.1 Results by company

The results of the content analysis by company, showing the percentage scored for the combined 12 measurement questions, is shown in Table 4.1. The percentage was calculated by counting the numer of positive measurements out of the total items measured The detailed results are shown in appendix 2.

Table 4.1: Content analysis by company, shown per company.

Company name	Score	Company name	Score
African Rainbow Minerals	91.67%	Impala Platinum Holdings	75.00%
Anglo American	83.33%	Investec	25.00%
Anglo American Platinum	66.67%	JSE Limited	0.00%
AngloGold Ashanti	66.67%	Kumba Iron Ore	91.67%
Barclays Africa Group	8.33%	Life Healthcare	41.67%
Barloworld	75.00%	Massmart Holdings	16.67%
BHP Billiton	66.67%	Mondi	41.67%
British American Tobacco	50.00%	Nedbank	0.00%

Clicks Group	0.00%	Netcare Limited	8.33%
Compagnie Financiere Richemont AG	0.00%	Sanlam	0.00%
Distell Group Ltd	41.67%	Sasol	83.33%
EOH holdings Ltd	25.00%	Standard Bank Group	0.00%
Glencore	66.67%	Truworths International	25.00%
Gold Fields Limited	91.67%	Vodacom Group	41.67%
Grindrod	41.67%	Woolworths	75.00%

The highest score achieved by individual companies was 91.67%, and was scored by African Rainbow Minerals, Gold Fields and Kumba Iron Ore. The companies that scored the lowest (0%) were those who had no disclosure regarding their occupational health and safety performance. These companies were Compagnie Financiere Richemont AG, JSE Limited and Sanlam. These companies did not list occupational health and safety as a material issue and also did not disclose any details regarding their performance. The average obtained for all of the companies which form part of the JSE responsible investment index top 30, was 35%. A better understanding of the performance of these companies relative to those in other sectors can be obtained by grouping the companies according to their respective sectors.

4.2 Results per sector

For the purpose of grouping these companies, the Morgan Stanley Capital International (MSCI) Global Industry Classification System (GICS) (MSCI, 2016) was used. The population of companies was representative of 8 sectors, namely consumer staples, consumer discretionary, financials, healthcare, industrial, information technology, materials, and telecommunication services. The population distribution across these sectors is shown in Table 4.2.

Table 4.2: Sector distribution of population

Sector	Number of companies
Consumer discretionary	2
Consumer staples	5
Financials	6
Healthcare	2
Industrial	2
Information technology	1
Materials	11
Telecommunication services	1

For the purpose of this study, consumer staples and consumer discretionary were combined under consumer goods, and information technology and telecommunication services were combined under information and telecommunication services. The condensed sector distribution is shown in Table 4.3.

Table 4.3: Condensed sector distribution of population

Sector	Number of companies
Consumer goods	7
Financials	6
Healthcare	2
Industrial	2

Information and telecommunication services	2
Materials	11

4.3 GRI checklists

Some of the questions used to conduct the content analysis were compiled based on the GRI G4 guidelines. During the content analysis it became evident that some of the companies in the population use GRI checklists, which is a separate document in some cases, and in other cases is integrated into the sustainability report. Of the 19 companies who use the GRI checklists, 17 companies also publish separate sustainability reports. A total number of 21 companies, however, publish separate sustainability reports.

The checklist typically consists of a table which lists the criteria of the GRI guidelines and the company's responses alongside the criteria. In the cases where the company does not disclose on a specific issue, the report either states that the company does not disclose on the subject, or the criteria is omitted.

The number of companies per sector who make use of a GRI checklist, as well as the number of companies who publish a separate sustainability report, is shown in Table 4.4.

Table 4.4: The number of companies per sector who make use of a GRI checklist and publish a separate sustainability report

Sector	**Number of companies in this sector**	**Number of companies who publish GRI checklists**	**Number of companies who publish separate sustainability reports**
Consumer goods	7	3	4
Financials	6	3	4
Healthcare	2	0	0
Industrial	2	2	1
Information and telecommunication services	2	1	1
Materials	11	10	11

Overall, the biggest utilization of GRI checklists was among companies in the industrial and materials sectors. The sector with the most frequent publication of separate sustainability reports was also among companies who form part of the materials sector.

There was also a positive correlation between GRI disclosures and GRI checklists, with the companies who publish GRI checklists scoring on average higher against the GRI-based questions. The eleven companies who did not publish GRI checklists scored an average of 9%, whereas the nineteen companies who publish GRI checklists scored an average of 32.5%. This was calculated as the average positive measurements of the GRI-based questions for all of the companies who either did, or did not, publish GRI checklists.

The companies who published GRI checklists also scored better overall, with an average positive response of 57%, as opposed to 19% among the companies who did not publish GRI checklists.

4.4 Materiality

Of the companies studied, 77% listed occupational health and safety as a material risk. The number and percentage of these companies per sector is shown in Table 4.5.

Table 4.5: Number and persentage of companies per sector that list occupational health and safety as a material risks.

Sector	**Number of companies in this sector**	**Number of companies who listed occupational health and safety as a material risk**	**Percentage of companies who list occupational health and safety as a material risk.**
Consumer goods	7	5	71%
Financials	6	1	17%
Healthcare	2	2	100%
Industrial	2	2	100%
Information and telecommunication services	2	2	100%
Materials	11	11	100%

The companies who did not list occupational health and safety as a material risk also scored markedly lower overall compared with the companies who listed occupational health and safety as a material risk. The overall score of the companies who list occupational health and safety as a material risk was 56%.

4.5 Disclosure performance by sector

4.5.1 Summary of disclosure performance per sector

The average positive measurement percentage for each sector was calculated and is given in Table 4.6. This shows that the materials sector had the best overall occupational health and safety disclosure level, followed by the industrial sector.The worst disclosure level was found to be in the financial sector.

Table 4.6: Combined average positive measurement percentage summary for all sectors.

Sector	**Combined average positive measurement percentage obtained for all of the companies which form a part of the sector**
Consumer goods	30%
Financials	6%
Healthcare	25%
Industrial	58%
Information and telecommunication services	33%
Materials	75%

4.5.2 Materials

The best overall performance in terms of occupational health and safety disclosure was among companies in the materials sector. This sector had an overall average occupational health and safety disclosure score of 75% for all of the questions combined.

The companies with the best overall health and safety disclosure were Gold Fields Limited, Kumba Iron Ore and African Rainbow Minerals. All three of these companies scored 91.67%, although African Rainbow Minerals scored only 50% with the GRI guidelines occupational health and safety disclosure questions. Kumba Iron Ore and

Gold Fields scored 58.3% with the GRI questions. These were the highest scores attained for the GRI questions.

The scores of each question for the companies in the materials sector are shown in Table 4.7.

Table 4.7: Disclosure scores for the companies in the materials sector.

(Questions marked in grey are questions related to the GRI reporting guidelines).

Measurement	**Number of positive measurements for the sector (out of the 11 companies in this sector)**	**Percentage of positive measurements for the sector**
Does the company disclose the director or senior manager responsible for occupational health and safety?	10	91%
Does the company disclose OHSAS 18 001 compliance?	8	73%
Does the company disclose Occupational Health and Safety Act (86:1993) compliance?	1	9%
Does the company disclose that it conducts external occupational health and safety audits?	11	100%
Does the company disclose TRIR (Total recordable incident rate)? (G4-LA6)	11	100%
Does the company disclose occupational illness rate? (G4-LA6)	10	91%
Does the company disclose occupational fatalities? (G4-LA6)	11	100%
Does the company disclose the percentage of the total workforce represented in formal joint management (Worker health and safety committees)? (G4-LA5)	4	36%
Does the company disclose the level of absenteeism among workers? (G4-LA6)	6	55%
Does the company report on whether there are workers who have a high incidence or high risk of specific diseases associated with their occupational	10	91%

activities? (G4-LA7)		
Does the company report on health and safety topics which are covered in formal agreements with trade unions? (G4-LA8)	6	55%

The areas where the companies in the materials sector scored the highest were the reporting of TRIR and fatalities. These companies also scored high among reporting the rate of occupational illnesses among employees, as well as reporting on whether there are workers with a high incidence or high risk of contracting specific occupational illnesses. Most of these companies also indicated which director or senior manager was primarily responsible for occupational health and safety. Even though most companies reported that they comply with the requirements of OHSAS 18001, the percentage of companies who explicitly mentioned that they conform with the South African Occupational Health and Safety Act (86:1993) was very low. A leading safety indicator which these companies also do not disclose on well, is absenteeism.

Other metrics which these companies scored lower on, were for the disclosure of the "percentage of employees which are represented in formal joint management", as well as of "what health and safety topics are covered in formal agreements with trade unions". These companies, however, reported that they operate in highly unionised environments, which makes it likely that these figures are available, but are not actively being disclosed.

Table 4.8 shows that the good results of this sector was driven primarily by companies who form part of the mining sector.

Table 4.8: Disclosure scores for the companies in the population who form part of the materials sector.

Company name	**Sector (Sharenet)**	**Overall**	**GRI Questions**
African Rainbow Minerals	Metals & Minerals	91.67%	50.00%
Anglo American	Metals & Minerals	83.33%	50.00%

Anglo American Platinum	Platinum	66.67%	33.33%
AngloGold Ashanti	Gold Mining	66.67%	33.33%
BHP Billiton	Metals & Minerals	66.67%	41.67%
Glencore	Metals & Minerals	66.67%	41.67%
Gold Fields Limited	Gold Mining	91.67%	58.33%
Impala Platinum Holdings	Platinum	75.00%	50.00%
Kumba Iron Ore	Steel	91.67%	58.33%
Mondi	Paper	41.67%	16.67%
Sasol	Chemicals – Speciality	83.33%	50.00%

4.5.3 Industrial

The industrial sector has a relatively small company representation compared to the other sectors which are represented in the population. This sector, however, was the second best performer overall, with an average occupational health and safety disclosure score of 58%.

Table 4.9 shows the disclosure performance of the companies in the industrial sector.

Table 4.9: Disclosure scores for the industrial sector companies.

(Questions marked in grey are questions related to the GRI reporting guidelines).

Measurement	**Number of positive measurements for the sector (out of the 2 companies in this sector)**	**Percentage of positive measurements for the sector**
Does the company disclose the director or senior manager responsible for	1	50%

occupational health and safety?		
Does the company disclose OHSAS 18 001 compliance?	1	50%
Does the company disclose Occupational Health and Safety Act (86:1993) compliance?	0	0%
Does the company disclose that it conducts external occupational health and safety audits?	2	100%
Does the company disclose TRIR (Total recordable incident rate)? (G4-LA6)	2	100%
Does the company disclose occupational illness rate? (G4-LA6)	1	50%
Does the company disclose occupational fatalities? (G4-LA6)	2	100%
Does the company disclose the percentage of the total workforce represented in formal joint management (Worker health and safety committees)? (G4-LA5)	1	50%
Does the company disclose the level of absenteeism among workers? (G4-LA6)	1	50%
Does the company report on whether there are workers who have a high incidence or high risk of specific diseases associated with their occupational activities? (G4-LA7)	1	50%
Does the company report on health and safety topics which are covered in formal agreements with trade unions? (G4-LA8)	0	0%

Similar to the disclosure of the companies in the materials sector, the companies in the industrial sector disclosed thoroughly on TRIR as well as on fatalities. These companies also failed to disclose whether they comply with the South African Occupational Health and Safety Act (86:1993). Disclosure in terms of topics covered in formal agreements with trade unions was also low or omitted.

4.5.4 Information and telecommunications services

The sector which had the third highest level of disclosure was the information and telecommunications sector. This sector was also represented by a comparatively small number of companies, but managed to score 33% overall for occupational health and safety disclosure. Both of the companies in this sector, however, listed occupational health and safety as a material risk. The occupational health and safety disclosure performance of the information and telecommunications services sector is shown in Table 4.10.

Table 4.10: Disclosure scores for the information and telecommunications services sector companies.

(Questions marked in grey are questions related to the GRI reporting guidelines).

Measurement	**Number of positive measurements for the sector (out of the 2 companies in this sector)**	**Percentage of positive measurements for the sector**
Does the company disclose the director or senior manager responsible for occupational health and safety?	1	50%
Does the company disclose OHSAS 18 001 compliance?	0	0%
Does the company disclose Occupational health and safety act (86:1993) compliance?	1	50%
Does the company disclose that it conducts external occupational health and safety audits?	0	0%
Does the company disclose TRIR (Total recordable incident rate)? (G4-LA6)	2	100%
Does the company disclose occupational illness rate? (G4-LA6)	0	0%
Does the company disclose occupational fatalities? (G4-LA6)	1	50 %
Does the company disclose the percentage of the total workforce represented in formal joint management (Worker health and safety committees)? (G4-LA5)	0	0%

Does the company disclose the level of absenteeism among workers? (G4-LA6)	1	50%
Does the company report on whether there are workers who have a high incidence or high risk of specific diseases associated with their occupational activities? (G4-LA7)	0	0%
Does the company report on health and safety topics which are covered in formal agreements with trade unions? (G4-LA8)	0	0%

Similar to the disclosure of the materials and industrial sectors, the companies in the information and telecommunications services sector thoroughly disclosed on TRIR. The disclosure in terms of fatalities was, however, less thorough. This could be due to an absence of fatalities without a zero fatalities report. Occupational illness/disease disclosure in this sector was negligible. This is possibly due to the fact that this sector has a very low occurrence of occupational illnesses. This sector also does not disclose OHSAS 18001 compliance, but has a higher disclosure rate of conformance to the South African Occupational Health and Safety Act (86:1993).

4.5.5 Consumer goods

The consumer goods sector achieved the second lowest occupational health and safety disclosure score. This is likely due to the fact that only 71% of companies view occupational health and safety as a material risk.

The occupational health and safety disclosure performance of the consumer goods sector is shown in Table 4.11.

Table 4.11: Disclosure scores for the companies in the consumer goods sector.

(Questions marked in grey are questions related to the GRI reporting guidelines).

Measurement	**Number of positive measurements for the sector (out of the 7 companies in this sector)**	**Percentage of positive measurements for the sector**

Does the company disclose the director or senior manager responsible for occupational health and safety?	0	0%
Does the company disclose OHSAS 18 001 compliance?	0	0%
Does the company disclose Occupational health and safety act (86:1993) compliance?	2	29%
Does the company disclose that it conducts external occupational health and safety audits?	3	43%
Does the company disclose TRIR (Total recordable incident rate)? (G4-LA6)	4	57%
Does the company disclose occupational illness rate? (G4-LA6)	2	29%
Does the company disclose occupational fatalities? (G4-LA6)	4	57%
Does the company disclose the percentage of the total workforce represented in formal joint management (Worker health and safety committees)? (G4-LA5)	1	14%
Does the company disclose the level of absenteeism among workers? (G4-LA6)	2	29%
Does the company report on whether there are workers who have a high incidence or high risk of specific diseases associated with their occupational activities? (G4-LA7)	2	29%
Does the company report on health and safety topics which are covered in formal agreements with trade unions? (G4-LA8)	0	0%

Even though 71% of the companies in this sector view occupational health and safety as a material risk, only 57% disclose their TRIR and fatalities. None of these companies disclose OHSAS 18001 compliance, but 29% disclose that they comply with the South African Occupational Health and Safety Act (86:1993). This is higher than the 9% of companies in the materials sector who disclose compliance with the Act.

4.5.6 Financial

The financial sector had the lowest overall occupational health and safety disclosure level. This is likely a consequence of the fact that only 17% of these companies view occupational health and safety as a material risk. This sector is, however, well represented in the population by 6 companies.

The occupational health and safety disclosure performance of the companies in the finacial sector is shown in Table 4.11.

Table 4.12: Disclosure scores for the companies in the financial sector.

(Questions marked in grey are questions related to the GRI reporting guidelines).

Measurement	**Number of positive measurements for the sector (out of the 6 companies in this sector)**	**Percentage of positive measurements for the sector**
Does the company disclose the director or senior manager responsible for occupational health and safety?	2	33%
Does the company disclose OHSAS 18 001 compliance?	0	0%
Does the company disclose Occupational health and safety act (86:1993) compliance?	0	0%
Does the company disclose that it conducts external occupational health and safety audits?	1	17%
Does the company disclose TRIR (Total recordable incident rate)? (G4-LA6)	0	0%
Does the company disclose occupational illness rate? (G4-LA6)	0	0%
Does the company disclose occupational fatalities? (G4-LA6)	0	0%
Does the company disclose the percentage of the total workforce represented in formal joint management (Worker health and safety committees)? (G4-LA5)	0	0%
Does the company disclose the level of absenteeism among workers? (G4-LA6)	0	0%

Does the company report on whether there are workers who have a high incidence or high risk of specific diseases associated with their occupational activities? (G4-LA7)	0	0%
Does the company report on health and safety topics which are covered in formal agreements with trade unions? (G4-LA8)	0	0%

The only items which were reported on by the financial sector companies were the directors or senior managers who are responsible for occupational health and safety, as well as the conducting of external audits. In both these cases, however, only the minority of these companies made these disclosures.

5 Conclusion

The main research objective of this study was to perform an analysis on the occupational health and safety disclosure of JSE socially responsible investment index constituents. The study also provided insight into the disclosure of GRI indicators, as well as into the use of GRI checklists. From this study it was clear that not all of the sectors who are represented on the JSE Responsible Investment Top 30 Index disclose their occupational health and safety performance to the same detail and depth. The occupational health and safety disclosure of these companies were measured against the requirements set by the GRI guidelines, as well as measurements which were compiled though qualitative content analysis on the integrated reports of these companies.

The companies who made use of a GRI checklist in addition to their integrated report and sustainability report contents, were found to have a higher level of occupational health and safety disclosure.

The JSE Responsible Investment Top 30 Index consisted of 30 companies representing 6 sectors. Only the companies of 4 of these 6 sectors all considered occupational health and safety to be a material issue. Of the 30 companies, only 23 (77%) listed occupational health and safety as a material risk. In the financial sector, only 1 of the 6 companies listed occupational health and safety as a material issue. 5 of the 7 companies in the consumer goods sector, listed occupational health and safety as a material risk. It was also found that the companies who did not list occupational health and safety as a material risk, had a very low disclosure level with regard to this.

When comparing the sectors that fully considered occupational health and safety as a material issue, it was observed that the materials sector had the highest level of disclosure. This was mostly due to a good disclosure level by companies who form part of the mining sector. This is similar to a result obtained by a study conducted on JSE SRI companies to assess their water-related sustainability disclosure. This study found that the mining sector performed the best in terms of this disclosure (Botha, 2015). From this it can be concluded that companies who form part of the mining sector generally have a high level of disclosure in their integrated and sustainability reports.

Looking at the overall disclosure, it was observed that companies had a low disclosure in terms of the GRI indicators LA5 and LA8, which relate to the percentage of the workforce which are represented in formal joint management and the topics which are covered in formal agreements with trade unions, respectively. A total of only 6 of the 30 companies disclosed on these indicators. This indicates that, even though many of these companies operate in highly unionised environments, the disclosure regarding the details of agreements with the unions as well as the representation level on joint management is very low.

The highest level of disclosure was on TRIR, with a total of 20 of the 30 companies disclosing TRIR. All 20 of these companies list occupational health and safety as a material risk, but out of the 23 companies who list occupational health and safety as a material risk, only 20 diclosed TRIR.

Companies who publish GRI checklists as part of their sustainability reports, or as a separate report, scored higher overall with regard to their disclosure level, receiving an average disclosure score of 57%. Companies who do not publish GRI checklists, however, scored only 19%. It can thus be concluded that the use and publication of a GRI checklist results in a higher level of disclosure.

5.1 Recommendations for further studies

Recommended future studies on this subject include:

- Studies to compare the disclosure of companies who are constituents of the JSE Responsible Investment Top 30 Index with the disclosure of companies who are not constituents of the index.
- Comparison of the disclosure of the companies who are constituents of the index over the course of several years, The results of such a study would give an indication of whether there has been an improvement in disclosure over recent years.

The disclosure of occupational health and safety can also be compared with the disclosure of other ESG indicators such as environment and governance. Expanding the scope of the study to include these fields will also offer a wider view of the disclosure of each sector represented on the JSE Responsible Investment Top 30 Index.

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Appendixes

Appendix 1: Ethical clearance letter

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ETHICAL CLEARANCE

This letter serves to confirm that the research project of **DE WET, JI** has undergone ethical review. The proposal was presented at a Faculty Research Meeting and accepted. The Faculty Research Meeting assigned the project number **EMSPBS16/06/03-01/01**. This acceptance deems the proposed research as being of minimal risk, granted that all requirements of anonymity, confidentiality and informed consent are met. This letter should form part or your dissertation manuscript submitted for examination purposes.

Yours sincerely

Prof CJ Botha

Manager: Research - NWU Potchefstroom Business School

Original details: Wilma Pretorius(12090298) C:\Documents and Settings\Administrator\My Documents\Briewe MBA\2017\

Appendix 2: Occupational health and safety disclosure measurement summary by company

		Does the company disclose the director or senior manager responsible for occupational health and safety?	Does the company disclose OHSAS 18 001 compliance?	Does the company disclose Occupational health and safety act (86:1993) compliance?	Does the company disclose that it conducts external occupational health and safety audits?	Does the company regard occupational health and safety as a material risk?	Does the company disclose TRIR (Total recordable incident rate)? (G4-LA6)	Does the company disclose occupational illness rate? (G4-LA6)	Does the company disclose occupational fatalities? (G4-LA6)	Does the company disclose the percentage of the total workforce represented in formal joint management (Worker health and safety committees)? (G4-LA5)	Does the company disclose the level of absenteeism among workers? (G4-LA6)	Does the company report on whether there are workers who have a high incidence or high risk of specific diseases associated with their occupational activities? (G4-LA7)	Does the company report on health and safety topics which are covered in formal agreements with trade unions? (G4-LA8)	GRI check list	Sustainability report
Compagnie Financiere Richemont AG	Consumer goods	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Truworths International	Consumer goods	N	N	N	N	Y	Y	N	Y	N	N	N	N	N	Y
British American Tobacco	Consumer goods	N	N	N	Y	Y	Y	Y	Y	N	N	Y	N	Y	Y
Clicks Group	Consumer goods	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Distell Group Ltd	Consumer goods	N	N	Y	N	Y	Y	N	Y	N	Y	N	N	N	Y
Massmart Holdings	Consumer goods	N	N	N	Y	Y	N	N	N	N	N	N	N	Y	N
Woolworths	Consumer goods	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y

Barclays Africa Group	Financials	Y	N	N	N	N	N	N	N	N	N	N	N	Y	Y
Investec	Financials	Y	N	N	Y	Y	N	N	N	N	N	N	N	Y	Y
JSE Limited	Financials	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Nedbank	Financials	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y
Sanlam	Financials	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Standard Bank Group	Financials	N	N	N	N	N	N	N	N	N	N	N	N	N	Y
Life Healthcare	Healthcare	N	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N
Netcare Limited	Healthcare	N	N	N	N	Y	N	N	N	N	N	N	N	N	N
Barloworld	Industrial	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N
Grindrod	Industrial	N	Y	N	Y	Y	Y	N	Y	N	N	N	N	Y	Y
EOH holdings Ltd	Information and Telecommunications services	N	N	Y	N	Y	Y	N	N	N	N	N	N	N	N
Vodacom Group	Information and Telecommunications services	Y	N	N	N	Y	Y	N	Y	N	Y	N	N	Y	Y
African Rainbow Minerals	Materials	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
Anglo American	Materials	Y	Y	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
Anglo American Platinum	Materials	Y	Y	N	Y	Y	Y	Y	Y	N	N	Y	N	Y	Y
AngloGold Ashanti	Materials	Y	Y	N	Y	Y	Y	Y	Y	N	N	Y	N	Y	Y
BHP Billiton	Materials	Y	N	N	Y	Y	Y	Y	Y	N	Y	Y	N	N	Y

Glencore	Materials	Y	N	N	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y
Gold Fields Limited	Materials	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Impala Platinum Holdings	Materials	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Kumba Iron Ore	Materials	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mondi	Materials	N	Y	N	Y	Y	Y	N	Y	N	N	N	N	Y	Y
Sasol	Materials	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y

Appendix 3: Occupational health and safety disclosure question summary by sector

	Does the company disclose the director or senior manager responsible for occupational health and safety?	Does the company disclose OHSAS 18 001 compliance?	Does the company disclose Occupational health and safety act (86:1993) compliance?	Does the company disclose that it conducts external occupational health and safety audits?	Does the company regard occupational health and safety as a material risk?	Does the company disclose TRIR (Total recordable incident rate)? (G4-LA6)	Does the company disclose occupational illness rate? (G4-LA6)	Does the company disclose occupational fatalities? (G4-LA6)	Does the company disclose the percentage of the total workforce represented in formal joint management (Worker health and safety committees)? (G4-LA5)	Does the company disclose the level of absenteeism among workers? (G4-LA6)	Does the company report on whether there are workers who have a high incidence or high risk of specific diseases associated with their occupational activities? (G4-LA7)	Does the company report on health and safety topics which are covered in formal agreements with trade unions? (G4-LA8)	GRI checklist	Sustainability report
Consumer goods	0%	0%	29%	43%	71%	57%	29%	57%	14%	29%	29%	0%	43%	57%
Financials	33%	0%	0%	17%	17%	0%	0%	0%	0%	0%	0%	0%	50%	67%
Healthcare	0%	50%	50%	50%	100%	50%	0%	0%	0%	0%	0%	0%	0%	0%
Industrial	50%	50%	0%	100%	100%	100%	50%	100%	50%	50%	50%	0%	100 %	50%
Information and Telecommunications services	50%	0%	50%	0%	100%	100%	0%	50%	0%	50%	0%	0%	50%	50%
Materials	91%	73%	9%	100%	100%	100%	91%	100%	36%	55%	91%	55%	91%	100%