

Measuring the sustainability performance of the oil and gas industry: A balanced scorecard approach

C Nortjé
21154112
Hons Bcomm

Mini-dissertation submitted in partial fulfilment of the
requirements for the degree *Magister Commercii* in
Management Accounting at the Potchefstroom Campus of the
North-West University

Supervisor: Dr. S Middelberg

May 2014

ACKNOWLEDGEMENTS

I would like to express my deepest appreciation to the following people who made this study possible:

- Firstly, I would like to thank my Heavenly Father for giving me all the opportunities in life, and the courage and guidance to follow my dreams.
- To my family and friends, for their guidance, patience and support
- Dr Sanlie Middelberg for her guidance as my supervisor.
- Lastly, I would like to thank the National Research Foundation (NRF) for the financial support.

ABSTRACT

TITLE: Measuring sustainability performance of the oil and gas industry: A balanced scorecard approach

KEYWORDS: Sustainability, integrated reporting, balanced scorecard, GRI, oil and gas industry

Sustainability is one of the most important performance measurements in this fast changing business environment, as climate change and customer satisfaction is becoming real issues that managers have to face. Not only does it reflect the impact the company has on the economy, environment and society but also communicates corporate responsibility and smart business practices to the relevant shareholders.

The Johannesburg Stock Exchange Limited (JSE) is the first global stock exchange to compel listed companies to integrate sustainability reporting with their annual report in the form of an integrated report. This requirement came into effect on 1 March 2010. It will enable managers to assess their organisation's ability to create and uphold sustainability over the short, medium and long terms. It also allows managers and stakeholders to evaluate their business from a holistic perspective to report on a wider context of how it creates value for their shareholders and customers.

The GRI identified the global challenges regarding sustainability reporting and launched their first Sustainability Reporting Framework in 2000 to clearly and openly report on relevant sustainability issues. The GRI also provide Sector Supplements that focuses on sector specific performance measurements.

The balanced scorecard which celebrated its 20th anniversary in 2012, has been proven to be one of the most influential business management strategies of the last 20 years. Adjustments can be made to the traditional BSC by using an effective social responsibility framework, such as the GRI, to provide a sustainable balanced scorecard. It will express long-term organisational strategies, both financial and non-financial that is linked to sustainability.

The oil and gas industry is a multifaceted, global industry and a key player in the South African economy, which has a fundamental impact on safety, health, environmental and

social issues. The research was performed based on all the JSE listed companies in this industry based on an observational, ex post facto and descriptive research methodology. The integrated reports for both 2011 and 2012 were obtained and compared against the G3.1 Oil and Gas Sector Supplement indicators. It was found that selected oil and gas companies include sustainability issues in their integrated reports with a focus on social aspects. The contribution of the study was the development of a Sustainable Balanced Scorecard for the oil and gas industry.

OPSOMMING

TITEL: Die meting van die volhoubaarheidsprestasië van die olie- en gasindustrie: 'n Gebalanseerde telkaartbenadering

SLEUTELWOORDE: Volhoubaarheid, geïntegreerde verslagdoening, gebalanseerde telkaart, globale verslagdoeningsinisiatief (GRI), olie- en gasindustrie

Volhoubaarheid is een van die belangrikste prestasiëmeetinstrumente in hierdie vinnig veranderende sake-omgewing, aangesien klimaatsverandering en kliëntetevredenheid werklike kwessies word wat bestuurders in die gesig staar. Nie net reflekteer dit die impak wat die maatskappy op die ekonomie, omgewing en samelewing het nie, maar dit kommunikeer ook korporatiewe verantwoordelikheid en slim besigheidspraktyke aan die relevante belanghebbendes.

Die Johannesburgse Effektebeurs Beperk (JSE) is die eerste wêreldwye effektebeurs wat genoteerde maatskappye verplig om volhoubaarheidsverslagdoening by hul jaarlikse verslag, in die vorm van 'n geïntegreerde verslag, te integreer. Hierdie vereiste het effektief geword op 1 Maart 2010. Dit sal dit vir bestuurders moontlik maak om hul organisasie se vermoë om volhoubaarheid oor die kort-, medium- en langtermyn te skep en vol te hou, te assesser. Dit laat bestuurders en belanghebbendes ook toe om hul besigheid vanuit 'n holistiese perspektief te evalueer, om verslag te doen oor 'n wyer konteks oor hoe dit waarde vir hul aandeelhouers en kliënte skep.

Die GRI het die wêreldwye uitdagings ten opsigte van volhoubaarheidsverslagdoening geïdentifiseer en in 2000 hul eerste Volhoubaarheidsverslagdoeningsraamwerk geloods om duidelik en openlik ten opsigte van relevante verslagdoeningsaspekte verslag te doen. Die GRI verskaf ook sektorsupplemente wat op sektor-spesifieke prestasiëmetings fokus.

Die gebalanseerde telkaart (BSC), wat sy twintigste herdenking in 2012 gevier het, het homself bewys as een van die mees invloedryke sakebestuurstrategieë van die afgelope 20 jaar. Aanpassings kan aan die tradisionele BSC gedoen word deur van 'n effektiewe sosiale verantwoordelikhedsraamwerk, soos die GRI, gebruik te maak om 'n volhoubare gebalanseerde telkaart te lewer. Dit sal langtermyn organisasie-strategieë, beide finansiële en nie-finansiële, wat aan volhoubaarheid gekoppel is, uitdruk.

Die olie- en gasindustrie is 'n veelvlakkige-, wêreldwye industrie en 'n sleutelspeler in die Suid-Afrikaanse ekonomie, wat 'n fundamentele impak op gesondheids-, omgewings- en sosiale aspekte het. Die navorsing is uitgevoer gebaseer op al die JSE-genoteerde maatskappye in hierdie industrie gebaseer op 'n observasie-, *ex post facto*- en beskrywende metodologie. Die geïntegreerde verslae van beide 2011 en 2012 is verkry en vergelyk met die G3.1 olie- en gassektor-supplement-indikatore. Daar is gevind dat geselekteerde olie- en gasmaatskappye volhoubaarheidsaspekte in hul geïntegreerde verslae insluit, met 'n fokus op sosiale aspekte. Die bydrae van die studie is die ontwikkeling van 'n volhoubare gebalanseerde telkaart vir die olie- en gasindustrie.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	I
ABSTRACT	II
OPSOMMING.....	IV
LIST OF TABLES	IX
LIST OF FIGURES	X
CHAPTER 1	- 1 -
1. Introduction.....	- 2 -
1.1 Background.....	- 2 -
1.2 The balanced scorecard.....	- 3 -
1.3 Industry.....	- 3 -
1.4 Problem statement and research motivation.....	- 4 -
1.5 Research objectives.....	- 5 -
1.6 Research methodology.....	- 5 -
1.6.1 Literature review	- 5 -
1.6.2 Empirical research.....	- 6 -
1.7 Overview.....	- 6 -
CHAPTER 2.....	- 8 -
2.1 Introduction	- 9 -
2.2 Research design.....	- 10 -
2.2.1 The degree to which the research question has been crystallised.....	- 10 -

2.2.2	Control of variables	- 11 -
2.2.3	Purpose of the study	- 11 -
2.3	<i>Research methods and techniques</i>	- 13 -
2.3.1	Data collection.....	- 13 -
2.3.2	Research sample	- 14 -
2.4	<i>Summary</i>	- 14 -
CHAPTER 3		- 16 -
3.1	<i>Introduction</i>	- 17 -
3.2	<i>The oil and gas industry and the environment</i>	- 17 -
3.3	<i>Integrated reporting</i>	- 19 -
3.4	<i>Overview of the gri framework and sector supplement</i>	- 22 -
3.4.1	Content of the oil and gas sector supplement	- 25 -
3.5	<i>Balanced scorecard</i>	- 35 -
3.6	<i>Summary</i>	- 41 -
CHAPTER 4		- 43 -
4.1	<i>Background</i>	- 45 -
4.2	<i>Problem statement and research objectives</i>	- 46 -
4.3	<i>Research method</i>	- 48 -
4.4	<i>Literature review</i>	- 49 -
4.4.1	Sustainability	- 49 -
4.4.2	Balanced scorecard (BSC).....	- 53 -
4.5	<i>Results</i>	- 56 -

4.5.1	Key performance indicators.....	- 58 -
4.5.2	Development of the SBSC.....	- 60 -
4.6	<i>Concluding discussion and comments</i>	- 63 -
4.6.1	Limitations of the study.....	- 64 -
4.6.2	Areas for future research	- 64 -
4.7	<i>References</i>	- 65 -
CHAPTER 5		- 69 -
5.1	<i>Background</i>	- 70 -
5.2	<i>Research summary</i>	- 71 -
5.2.1	Literature research synopsis	- 71 -
5.2.2	Empirical research synopsis	- 71 -
5.2.3	Discussion	- 72 -
5.3	<i>Limitations of the study</i>	- 73 -
5.4	<i>Recommendations for futher research</i>	- 74 -
5.5	REFERENCES	- 75 -
5.6	ANNEXURE A: GRI PERFORMANCE INDICATORS	- 83 -

LIST OF TABLES

Table 3.1 Economic performance indicators	- 28 -
Table 3.2 Labour practices and decent work performance indicators	- 29 -
Table 3.3 Human rights performance indicators.....	- 31 -
Table 3.4 Society performance indicators	- 32 -
Table 3.5 Product responsibility performance indicators	- 33 -
Table 3.6 Environmental performance indicators.....	- 34 -
Table 4.1. Oil and Gas Sector Supplement indicators	- 57 -
Table 4.2. Environmental exposure of <i>oil and gas</i> companies	- 61 -
Table 4.3. Social exposure of <i>oil and gas</i> companies.....	- 62 -

LIST OF FIGURES

Figure 3.1: GRI sustainability areas.....	- 23 -
Figure 3.2 Four perspectives of the BSC	- 36 -
Figure 3.3: A generic sustainability strategy map	- 39 -
Figure 4.1: Corporate reporting of BRICS countries.....	- 45 -
Figure 4.2: Sustainability dimensions.....	- 49 -
Figure 4.3. Strategic relevance of environmental and social aspects	- 56 -
Figure 4.4. Key performance indicators for the <i>oil and gas</i> industry.....	- 59 -
Figure 4.5. Sustainable balanced scorecard for the <i>oil and gas</i> industry.....	- 63 -

CHAPTER 1

1. INTRODUCTION

1.1 BACKGROUND

The global, competitive business environment in which organisations operate has increasingly become more turbulent and uncertain, which means timely and effective adaption is more essential than ever before (Groot & Selto, 2013). This also includes the fast developing concept of sustainability and environmental awareness, which encourages organisations to use performance measurements that reflect corporate responsibility and smart business practices (Barrows, 2012:34, Tilley, 2012:65).

Sustainability can be defined as development that satisfies the needs of customers today, without compromising the future generations' ability to satisfy theirs (Anon, 2011). Sustainability reporting focuses on economic, social and environmental issues and is also referred to as sustainability reporting, non-financial reporting, corporate social reporting and the triple bottom line (SAICA, 2012). The main goal of sustainability is to minimise cost and maximise the benefits for both the customer and the environment (Weaver, 2012:1042). According to The International Petroleum Industry Environmental Conservation Association (IPIECA, 2013), sustainability reporting not only helps to enhance business processes and relationships, but also provides a platform to describe how strategic issues are addressed through long-term plans and initiatives.

The Johannesburg Stock Exchange Limited (JSE) is the first global stock exchange to compel listed companies to integrate sustainability reporting with their annual report in the form of an integrated report. This requirement came into effect on 1 March 2010 (Ramalho, 2010). Companies are restructuring their business models to adapt to these changing demands of the market to report on specific business performances (Wadee, 2011). Integrated reporting is an approach that demonstrates the links between an organisation's strategy, governance and financial performance, and the social, environmental and economic context within which it operates (Holmes, 2012a:30). It enables companies to assess their organisation's ability to create and uphold sustainability over the short, medium and long terms. It also allows managers and stakeholders to evaluate their business from a holistic perspective to report on a wider context of how it creates value for their shareholders and customers (Leuner, 2012).

There is a wide diversity of views on which aspects of performances should be reported on, because of the multiple possibilities to define sustainability. The balanced scorecard, as a performance measurement, can be used as a starting point to incorporate environmental and social aspects into the main management system and to effectively support strategic decision-making and control (Groot & Selto, 2013:9; Figge *et al.*, 2002:269).

1.2 THE BALANCED SCORECARD

The balanced scorecard is a top-down technique developed by Kaplan and Norton that integrates financial and non-financial features of corporate success and helps organisations to be more strategy focused (CIMA, 2011). The balanced scorecard focuses on four perspectives, which include:

- i. financial measurements;
- ii. the customer;
- iii. internal processes; and
- iv. innovation and learning within the organisation.

This technique is used to i) identify and align strategic initiatives, ii) link budgets with the strategy, and iii) conduct performance reviews to adapt and improve the organisation's strategy (CIMA, 2011). The balanced scorecard is greatly dependent on the reliability of the cause-and-effect relationship between the leading and lagging indicators to assist with decision-making and control (Groot & Selto, 2013). Lagging indicators indicate whether the strategic objectives in each perspective were achieved. The leading indicators, on the other hand, are firm specific and represent how the results, indicated by the lagging indicators, should be achieved. The characteristics of the balanced scorecard can also be used to address sustainability through management of environmental and social aspects (Figge *et al.*, 2002).

1.3 INDUSTRY

The oil and gas industry is a multifaceted, global industry that affects the economy, environment and our daily lives. This industry enables and drives widespread economic growth, both nationally and internationally. Although the industry faces uncertainty

regarding the rapid changes in the oil market, it remains a magnet for stakeholders and shareholders' attention – not only for the economic development, but also for the fundamental impact on safety, health, environmental and social issues (IPIECA, 2013).

The oil and gas industry includes the global processes of exploration, extraction, refining, transporting and marketing of petroleum products. This industry represents the world's largest industry in terms of dollar value (Trencome, 2013).

BP Southern Africa, Chevron South Africa, Engen Petroleum, PetroSA, Sasol Oil, Shell South Africa and Total South Africa are the main players in the South African oil industry. The industry contributes to the South African economy by manufacturing more than 90% of South Africa's petroleum products, supporting employment for over 100 000 people and sells approximately 24.9 billion litres of petroleum products annually (SAPIA, 2013).

The process of producing petroleum products presents a high risk of polluting the natural environment and affects the way stakeholders consider a company's environmental performance. South Africa meets approximately 77% of its energy needs through coal; therefore, South Africa has been identified as the 14th highest emitter of greenhouse gases (SouthAfrica.info, 2013). This is one of the reasons why firms have to focus their attention on the improvement of the operating process to raise profitability and reduce the negative impact on the environment (Jung *et al.*, 2001). According to the International Petroleum Industry Environmental Conservation Association (IPIECA), stakeholder engagement is a crucial part of ensuring that the sustainability report is relevant and accessible and therefore a BSC approach will help to achieve this goal (IPIECA, 2013).

1.4 PROBLEM STATEMENT AND RESEARCH MOTIVATION

The biggest challenge for the oil and gas industry is to continually find and provide products that are both environmentally and socially responsible, while simultaneously contributing to global economic and social development (IPIECA, 2013). Two of the main key success factors for these companies are the improvement of productivity and the emphasis on the environmental performance (Jung *et al.*, 2001).

In 2010, the oil and gas industry was the second highest sector to submit reports to the Global Reporting Initiative (GRI). This number will increase as the GRI announced that,

from 31 December 2012, all GRI reports published by organisations in the oil and gas sector are required to use the oil and gas sector supplement. This sector supplement addresses six main objectives, i.e. environment, human rights, labour practices and decent work, society, product responsibility, and economic issues (GRI, 2013).

Oil and gas companies develop strategic objectives to ensure their sustainability, but lack the skills to manage and measure the performance of these objectives. The balanced scorecard can be implemented to link the goals and these objectives.

1.5 RESEARCH OBJECTIVES

The main objective of this study is to determine whether a sustainable balanced scorecard (SBSC) can assist oil and gas companies with their integrated reporting. The main objective will be achieved by means of the following secondary objectives:

- Identify key performance measurements published in the sustainability reports, as part of the integrated report, and whether these relate to the GRI sector supplement,
- Evaluate these measurements according to the four principles of the balanced scorecard, and
- Identify relevant sustainability measurements to develop a SBSC for the oil and gas industry.

1.6 RESEARCH METHODOLOGY

This study will consist of a literature review and an empirical study.

1.6.1 LITERATURE REVIEW

The literature review will include studying nationally and internationally published academic literature. This will be performed to obtain a comprehensive understanding of integrated reporting, the implementation of the global reporting initiatives and the balanced scorecard within the petroleum industry.

1.6.2 EMPIRICAL RESEARCH

The empirical study will be performed on the companies listed on the Integrated Oil and Gas sector of the JSE Ltd, namely: Oando plc, Sacoil Holdings and Sasol Ltd. This sector represents 3% of the total JSE market capitalisation (Mayer, 2013). The sustainability reports of these companies will be scrutinised to identify sustainability performance measurements that can be used in a sustainable balanced scorecard. Sasol, as the largest company in this sector, is also one of the top performers in the Dow Jones Sustainability Emerging Markets Index (Mayer, 2013).

As mentioned above, the oil and gas industry faces a great challenge in improving their operations to comply with the JSE and GRI reporting standards. Therefore, it is of great importance that these companies identify and implement easy tools to measure their sustainability performance.

1.7 OVERVIEW

This mini-dissertation will be divided into the following chapters.

Chapter 1: Introduction

The first chapter served as an introduction to this research study, and included the following:

- Background regarding sustainability, the balanced scorecard and the petroleum industry;
- Problem statement and motivation to the study;
- Research objectives; and
- Research methodology.

Chapter 2: Research methodology

Chapter 2 will discuss the research methodology as well as the methodology applicable to this study.

Chapter 3: Supporting literature

This chapter will consist of literature regarding the oil and gas industry, integrated reporting, the GRI as well as the balanced scorecard. This literature will provide a proper understanding of the financial environment of the JSE-listed oil and gas industry and will assist in the formulation of a sustainable balanced scorecard.

Chapter 4: Research article: Measuring sustainability performance of the oil and gas industry: A Balanced Scorecard approach

Chapter 4 will be presented in the form of an article. This will include a discussion of sustainability, integrated reporting as well as a detailed analysis of the balanced scorecard. The above-mentioned problem will be addressed in this article as well as results obtained from the empirical study.

Chapter 5: Conclusions and recommendations

Conclusions will be made based on the results of the empirical study and areas for further research will be identified.

Annexures

Any applicable documentation will be included as an annexure in order to enhance the understanding of the study.

CHAPTER 2

2.1 INTRODUCTION

Business research within the fast-changing global marketplace aims to provide adequate information that can serve as a basis for decision-making (Coldwell & Herbst, 2004). The purpose of this chapter is firstly to fully understand the concept of research methodology and research design and secondly to provide insight into the selected design used in this study and the motivation behind this selection. Definitions used in research methodology are discussed, as well as the research design, selection methods and how the relevant data was obtained.

Research is the process in which scientific methods and techniques are used to expand knowledge in a specific field of study by using objective methods and procedures (Welman & Kruger, 2002). Kumar (2008) describes *research* as an intensive and purposeful movement to attain a fuller understanding of the unknown. This can be achieved by means of observation, comparison and experimentation. The main purpose of research is to achieve new insight into a specific phenomenon and to formulate answers and solutions to previously identified research questions (Kumar, 2008). Research can therefore contribute to management activities through three distinctive function roles (Welman & Kruger, 2002; Coldwell & Herbst, 2004), namely:

- i. The descriptive function, where the nature of the study is clearly defined;
- ii. The diagnostic function explains why things are the way they are; and
- iii. The predictive function.

It is important to define and explain such prediction as it can be used to indicate how variables are related to one another and how a change in one variable can affect another. It can also provide guidelines on how to change and control specific variables. Coldwell and Herbst (2004) describe business research as a systematic and objective process of gathering, recording and analysing data for decision-making, problem-solving and identifying new opportunities. It can therefore be used as an effective management tool to reduce uncertainty in the business environment. Kumar (2005) implies that research is the process designed to be unbiased, objective and that uses methods and techniques that are valid and reliable. Reliability is equivalent to consistency within the same research phenomenon. Validity, in broad, refers to the extent to which findings within the research can be supported by the available evidence (Coldwell & Herbst, 2004).

The approach used to explore a specific subject is called the *methodology*. *Research methodology* is a way to analytically solve the research problem. It refers not only to the *research methods*, but also focuses on a wider scope as to why these methods or techniques are used and the logic behind them (Kumar, 2008). Methods and procedures are developed by *research methodologies* to systematically provide information to perform the research (Kumar, 2005).

2.2 RESEARCH DESIGN

The *research design* is a strategy used to structure the research in order to address the research question (Coldwell & Herbst, 2004). It is important to implement this strategy before collecting and analysing the relevant data (De Vaus, 2001). The *research design* deals with the detailing of data collection procedures, measurements and the analytical procedures of data to accomplish the research objectives. It also provides a framework to specify the relationship between the variables used in the research (Cooper & Schindler, 2008). Kumar (2005) describes a *research design* as a plan to achieve objectives and answer research questions validly, objectively, accurately and economically. There are a wide variety of *research designs* used in literature based on the nature and contribution to research. The *research design* encompasses factors such as the degree to which the research question has been crystallised, control of variables and the purpose of the study (Cooper & Schindler, 2008). The designs that are used in this study are discussed in the following section.

2.2.1 The degree to which the research question has been crystallised

Cooper and Schindler (2008) distinguish between exploratory and formal study. Exploratory research focuses on clarifying objectives and is conducted to discover future research problems and questions on subjects of which little is known. Exploratory research develops concepts more clearly and improves the final research design by determining whether or not a particular phenomenon exists. This process begins with the familiarisation of the literature regarding the specific topic (Coldwell & Herbst, 2004). Exploration relies more heavily on qualitative techniques to accomplish the objectives of exploration. Cooper and Schindler (2008) identify four exploratory techniques, namely i) Secondary data analysis, ii) Experience surveys, iii) Focus groups, and iv) Two-stage designs.

On the other hand, the formal study involves precise procedures and data sources to answer the research question posed. It serves a variety of research objectives such as describing a specific phenomenon or characteristics within a subject and to discover the relationship between different variables.

This study will be an exploratory study, as secondary data, in the form of sustainability reports, will be analysed. Literature will be used to gain general information regarding sustainability and the balanced scorecard. Both the literature review and the empirical study will clarify the objectives and problems regarding the formulation and implementation of a sustainable balanced scorecard.

2.2.2 Control of variables

Krishnaswamy *et al.* (2006) identify experimental and *ex post facto* research as the two main classifications of the *research design*. This is primarily because of the degree of control in manipulating the variables used in the research study. Experimental studies refer to intervention where the researcher attempts to control or change variables to determine the changes in the outcome. In an *ex post facto* design, the researcher has no control over the variables and can therefore only report on what has happened or is happening to the variables (Coldwell & Herbst, 2004; Cooper & Schindler, 2008). The economic, environmental and social milieu of the organisation can only be influenced by external sources and can therefore not be controlled. Research can only be conducted based on the history of the organisation's performance, and therefore recommendations on what can possibly be done to improve their sustainability, can be suggested. This research study can be classified as *ex post facto* research, as it is performed based on historical sustainability reports and the effect of economic, environmental and social variables can only be measured with limited internal control.

2.2.3 Purpose of the study

The research design based on the purpose of the study can be categorised into reporting, descriptive and causal. The essential difference between these studies lies in their objectives (Coldwell & Herbst, 2004). Reporting is a research design that is used more informally, and only reports on information and evaluations within the specific study field. Descriptive research is a more formalised study as it states information regarding the size,

form, distribution and existence of variables in the research study. The main objective of a descriptive study is to determine whether the variables are independent or not and then determine the magnitude of the relationship between the different variables (Cooper & Schindler, 2008).

Causal research aims at demonstrating the cause-and-effect relationship between variables. The process includes a forecast on how changes in a variable will affect other variables independently (Coldwell & Herbst, 2004).

However, the research problem and objectives are used to determine the methodology that should be followed. It is therefore appropriate to restate the main objectives as stated earlier in Chapter 1.

The main objective of this study is to determine whether a sustainable balanced scorecard can assist petroleum companies with their integrated reporting. The main objective will be achieved by means of the following secondary objectives:

- Identify key performance measurements published in the sustainability reports, as part of the integrated report, and whether these relate to the GRI Sector Supplement;
- Evaluate these measurements according to the four principles of the balanced scorecard; and
- Identify relevant sustainability measurements to develop a sustainable balanced scorecard.

The variables, related to the concept of sustainability, are discussed in this research paper and will be used to identify the magnitude of the relationship between these variables and those used in the balanced scorecard. Sustainability, as an increasingly important business concept, needs to be clearly understood and managers need to know how to effectively change their objectives to integrate sustainability in their normal business activities. Therefore, the research design is based on the purpose of the study, as it will provide insight into the sustainable balanced scorecard. It will be a descriptive study as it will provide literature on important concepts such as sustainability, the balanced scorecard and the GRI. The variables – economic, environmental, social – and the four perspectives of the balanced scorecard will be evaluated to determine whether these variables can be

incorporated to assist managers in their sustainability reporting process and to see whether it complies with the GRI framework.

2.3 RESEARCH METHODS AND TECHNIQUES

Research methods or *techniques* are methods used to gather data and information to perform research operations (Kumar, 2008). These two terms, however, are often used as synonyms. A *research method* is defined as a systematic and orderly approach to collect and analyse data to obtain specific information. It is important to know why and how to implement *research methods*, to decide whether they are relevant or not and what these *research methods* mean and indicate (Kumar, 2008). *Research techniques*, on the other hand, describe how to collect and analyse data in order to gain the relevant information.

2.3.1 Data collection

Data collection specifies the details of the task. It provides answers to the profound questions *who, what, when, how* and *where*.

Once the research design has been chosen, research participants have to be identified in order to carry out the research (Welman & Kruger, 2002). The method of data collection is divided into monitoring and communication processes. Monitoring includes the inspection of activities without gaining responses from participants. Communication study, in contrast to monitoring, refers to the collection of responses by means of personal or impersonal means (Cooper & Schindler, 2008). It can also be classified as either qualitative or quantitative. Qualitative research, by nature, is information that cannot be analysed by means of mathematical techniques. It provides an in-depth analysis of opportunities and possible threats in the business environment that can assist managers with sustainable decision-making (Coldwell & Herbst, 2004). This research is designed to describe the meaning and reason why certain phenomena occur. Quantitative research involves the collection of primary data to understand and resolve the research problem in numerical terms. It can also be described as research that can easily be measured by means of numbers (Coldwell & Herbst, 2004). Managers are turning back to qualitative techniques, as quantitative research falls short in providing insight into and trustworthy information for business decisions (Cooper & Schindler, 2008).

For purposes of this research study, the integrated reports of the selected companies in the oil and gas sector have to be collected in order to analyse the quality thereof. Furthermore, the sustainability reports of these companies issued to the GRI will also be analysed. Therefore, this study will make use of both qualitative and quantitative data.

2.3.2 Research sample

The population is referred to as the study object (Coldwell & Herbst, 2004). Du Plooy (2001:100) distinguishes between the population and the target population: the population is all possible research units, while the target population can be defined as the population to which the findings of the research can be generalised. In this study, the population includes all companies listed on the JSE Limited, as they are all required to issue integrated reports. The target population, on the other hand, only includes the oil and gas sector of the JSE Limited, which consists of Oando plc, Sacoil Holdings and Sasol Ltd.

2.4 SUMMARY

This chapter aimed to firstly provide insight into the concepts of research design and research methodology and secondly to present and motivate the selected design used in this study. Within the context of this study, the research design can be described as observational and *ex post facto*, where the variables are not manipulated but rather report on observations regarding the impact of the variables on each other and in the overall business practises (Coldwell & Herbst, 2004). It can further be classified as descriptive and explanatory, because sustainability reports and integrated reports will be analysed and explanations regarding the results will be provided.

Validity and reliability are two important characteristics of a research design. Validity can be described as the degree to which the data and information gathered from the target oil and gas companies can be applied to the relevant population of the JSE companies (Kallet, 2004). Reliability is determined by the degree to which research produces stable and consistent conclusions (Bryman & Bell, 2007).

Within the context of this study, the data collection took place by acquiring integrated and sustainable reports of the JSE oil and gas companies. The sustainable aspects used in the reports were measured up to the GRI framework and balanced scorecard. According to

Ligteringen (2013), sustainable reporting needs to be relevant, reliable, transparent and available. Therefore, the research in this study can be seen as both valid and reliable.

The research was conducted by doing an in-depth analysis of the sustainability reports of the JSE oil and gas industry and the GRI guidelines in the oil and gas sector supplement. These guidelines and sustainability reports were obtained from the GRI, as well as from the relevant oil and gas companies' websites. Academic papers regarding the BSC and related topics were researched by making use of academic databases, including but not limited to ScienceDirect, EBSCOhost and Google Scholar.

CHAPTER 3

3.1 INTRODUCTION

The purpose of this chapter is twofold; firstly, to identify key performance measurements published in the sustainability reports as part of the integrated report, and whether it relates to the GRI Sector Supplement, and secondly, to evaluate these measurements according to the four principles of the balanced scorecard. These secondary objectives were set in Chapter 1 (refer page 6).

The chapter will provide an overview of the oil and gas industry and the environment, followed by a discussion of integrated reporting as the latter is a mandatory requirement for all JSE-listed companies. However, the literature regarding integrated reporting will focus on sustainability reporting and not financial reporting, which has to adhere to International Financial Reporting Standards (IFRS). The next section will provide an overview of the GRI sustainability reporting framework, with specific reference to the oil and gas sector supplement. The chapter will conclude with a discussion on the balanced scorecard.

3.2 THE OIL AND GAS INDUSTRY AND THE ENVIRONMENT

The *oil and gas* industry has been identified as the world's most polluted industry (IPIECA, 2013). The industry can be categorised into three major components, such as upstream, midstream and downstream sectors. Upstream activities refer to the exploration, development and recovery of crude oil and natural gas; where downstream, which includes midstream operations, refers to the refining of crude oil, as well as the selling and distribution of end products (Trencome, 2013). The *oil and gas* sector, with reference to all three components, is constantly seeking to adapt to new challenges and examine new opportunities to meet the growing energy demand, while simultaneously managing the impact on the environment and society (IPIECA, 2013).

South Africa is Africa's foremost polluter and, reportedly, its mining sector (mainly coal) contributes approximately 40% of the total greenhouse gas emissions (GHGs) on the continent. South Africa's excessive use of coal for power generation, and production of petrol by leading public sector companies, questioned South Africa's effort and ability to face climate change (Pinto, 2012). South Africa's natural environment has, over the past 20 years, deteriorated nearly the fastest of most countries in the world, while globally the

effects of the historical oil spills in 1989 by Exxon Valdez and 2010 by British Petroleum (BP) are still being felt. These are some of the reasons why environmental sustainability has become the core of a sustainable development for *oil and gas* companies. Furthermore, adequate controls should be in place to ensure that scarce resources are managed correctly (Hattersley, 2012). However, organisations that rely on natural resources are directly associated with a high risk of environmental pollution. This risk, together with institutional regulations and the environmental concerns of stakeholders, has led towards a more value-orientated corporate environmental strategy that does not exclusively focus on economic performance, but also on economic and social performance (Chang *et al.*, 2011).

The global oil and gas industry association for environmental and social issues (IPIECA) was established in 1974 with the vision to provide leadership for the *oil and gas industry* with regard to operations and products that meet society's environmental and social performance expectations. It is the only global association that enables both the upstream and downstream *oil and gas* industry to improve performance through developing good practice in climate and energy, the environment and society (IPIECA, 2013). The South African Petroleum Industry Association (SAPIA) is an association member of IPIECA and shares the objectives to understand the needs of *oil and gas* stakeholders, to promote transformation and environmental leadership and to enhance communication regarding the organisation's economic and social progress (SAPIA, 2013).

Furthermore, performance trends in the *oil and gas industry* demonstrate that social and environmental performance contributes to long-term value creation and are valuable components that influence the bottom line by means of i) a reduction of cost of capital, ii) identifying carbon risks and opportunities, and iii) incident prevention (Serwiniwski, 2010).

According to Petrobras (2013), the 7th biggest energy company in the world, *oil and gas* companies face three main issues in the current competitive business environment, namely health and safety, environmental performance and employee retention. The *oil and gas industry* will therefore have a shift in its competitive advantage, which will be partly determined by the companies' ability to seize opportunities and manage risks associated with the increasing social and environmental performance expectations of customers, shareholders and stakeholders (Serwiniwski, 2010).

3.3 INTEGRATED REPORTING

In the last decade, the need for performance measurements beyond the organisations' financial perspective increased as organisations shifted towards a more sustainable strategy (Caraiani *et al.*, 2012). This can be described as the effective and sufficient use of scarce resources, financial and non-financial, in the process to deliver sustainable outcomes for all relevant stakeholders over the long term (Kiewa, 2011). Managers also recognise that sustainability or corporate social responsibility is a key aspect of value creation (Eccles & Krzus, 2010).

According to Charles Tilley, chief executive of CIMA, companies should place more emphases on the aspect of their business model that will support the long-term goals through short-term actions. This can be done by effectively reporting on elements such as cost leadership, workforce, attracting and retaining customers and innovations that directly address sustainability issues (Tilley, 2011). Lord Browne, former chief executive of BP, says the greatest benefits come when business, government and consumers move together towards a sustainable future. These investor relationships, which play an important role in both sustainability and as a performance measurement, can be defined as the long-term interactive relationship between the organisation, government, customers and the society in which they operate (Chang *et al.*, 2011). According to Mervyn King, former chairman of the Global Reporting Initiative (GRI) and current chairman of the International Integrated Reporting Council (IIRC), governance, strategy and sustainability are factors that are inseparable and cannot be dealt with in isolation, as they need to improve transparency and materiality (Gibbons *et al.*, 2010). The government therefore needs to provide regulatory environments that ensure that businesses are not disadvantaged if they choose to reduce their emissions, and need to be awarded if they do. Organisations should also understand the needs of their customers, so they can make favourable decisions for them as well as the planet, and inform consumers about the benefits and the value they can add when changing their buying habits (Holmes, 2012a).

The processes of sustainable decision-making and reporting are simultaneously influenced by two forms, according to Kiewa (2011), namely market pull and organisational push. The market pull focuses on the investor's requirement to first understand the impact of the organisation's sustainable activities on asset value, earnings and future cashflows before making new investments. Simultaneously, some organisations realise that through

sustainable reporting they i) gain sufficient business and operational benefits, ii) can lower potential risk, and iii) improve financial bottom line. This is referred to as organisational push.

The sustainable development, strategy and value creation of a company focuses on the *Triple Bottom Line theory* (TBL), which includes both financial and non-financial objectives (Caraianni *et al.*, 2012). The TBL can be summarised as people, planet and profit. It focuses on three main sustainability sectors (CIMA, 2011; verifysustainability, 2013):

- Social justice

This includes issues such as health and safety, ethics and contributions to the community. It also refers to the quality of working conditions, equal opportunities for all employees and the organisation's attention to human rights.

- Environmental quality

Environmental quality refers to the organisation's focus on using renewable rather than infinite energy resources and managers' methods of addressing risks of contamination. It includes actions to reduce carbon dioxide emissions and to improve relations with authorities.

- Economic prosperity

This includes all relevant economic issues such as business relationships, supplier and customer structure, market position and maintaining public trust in the brand of the organisation. It also refers to consistent growth, risk management and shareholder return.

As companies operate in a turbulent corporate environment, the corporate reporting system should evolve to adequately report on important issues. This involves reporting on the linkages between the organisations' strategy, governance, financial performance as well as social, environmental and economic issues. The International Integrated Reporting Council (IIRC) developed an integrated reporting (IR) framework that can help companies to take more sustainable decisions and can assist stakeholders and investors in understanding how an organisation is really performing (Holmes, 2012a). The main goal

of the IIRC is to create a global framework to report on a company's i) strategy, ii) governance, iii) performance, and iv) prospects, in an understandable, comparable format (IIRC, 2012). An integrated report also provides valuable information that assists shareholders to understand risk management, the organisation's environmental responsibilities as well as their innovations to comply with sustainability standards (Caraiani *et al.*, 2012). Research also shows that these reports help to form relationships with various agencies, and identifies areas where improvement can be made, such as management and measurement systems and cost controls (Gibbons *et al.*, 2010).

This integrated report should be structured around the strategic objectives, governance and the organisation's business model, as well as financial and non-financial information. It may be presented in a single integrated report or a financial report with reference to a separate sustainability report. These reports also provide a more balanced view, and take stakeholder concerns into consideration (Harland, 2013).

The IR recognises that there are both 'hard and soft' risks within the business environment and both need to be included in the reporting process. Although a company's financial performance remains important, non-financial and intangible assets are becoming one of the major value drivers of many companies (Tilley, 2012). Research shows that the latter, which refers to intellectual capital, has the potential to lead the company to a reputational disaster if it is not managed effectively (Tilley, 2013). Therefore, the efficient management and implementation of an integrated report contribute to the organisation's short-, medium- and long-term value creation and provide benefits to the environment in which it exists. The goal is to improve the quality of corporate reporting to provide strategic, long-term goals for the relevant stakeholders (Caraiani *et al.*, 2012). Non-financial information can be defined and described in numerous ways, such as key performance measurement, which generally refers to quantitative measures that assess the quality, sustainability and variability of a company's cashflow and earnings. These indicators are regarded as historically leading indicators for future financial performance (Eccles & Krzus, 2010). Managers can then rely more on key performance indicators (KPI) to assist in making predictions about future financial performance.

The most challenging performance measurement issues, especially for the *oil and gas industry*, are those that refer to biodiversity, oil spills, water management and climate change (IPIECA, 2013). The Carbon Disclosure Project (CDP), which recently announced

their alliance with the International Integrated Reporting Council (IIRC), is the only globally recognised system that provides information to improve the management of environmental risks. The newly developed IIRC framework will include guidelines and reporting standards such as the CDP climate change reporting framework and relevant water and forest risk information. This will encourage managers to report on the use and depreciation of natural capital, which is an integral part of the integrated report (CDP, 2013). According to research conducted by the Business Brief, companies agreed that the CDP contributed in i) improving efficiencies, ii) data gathering, iii) shaping business opportunities, and iv) overall competitiveness (Hattersley, 2012). A recent report from the CDP shows that more than 37% of companies recognise and understand that the mitigation of the effects of climate change has to be included in their business strategy, as the risk to be affected by unexpected climate changes increases (CIMA, 2013). The Global Reporting Initiative can also be used in the reporting process, as it provides a range of sustainable guidelines and the IIRC frequently refers to these guidelines for further criteria to incorporate in the integrated reporting framework.

Considering the above combined with the mandatory requirements of the JSE (refer Chapter 1, page 2), integrated reporting can be used as a management tool that indicates how a business adapts and reacts to certain opportunities and risks it faces in the changing business environment (Tilley, 2012).

3.4 OVERVIEW OF THE GRI FRAMEWORK AND SECTOR SUPPLEMENT

The Global Reporting Initiative (GRI), a non-profit organisation, was founded in 1997 in reaction to the 1989 Exxon Valdez oil spill (GRI, 2013a; Musikanski, 2012). Businesses, governments, advocacy groups, universities and research organisation teamed together to create a set of sustainable guidelines that can be used to measure and manage organisational sustainability. The first version of the GRI guidelines was launched in 2000 and became a sustainability reporting framework for global companies. In May 2013, the latest G4 guidelines were launched (GRI, 2013a). The implementation of the GRI guidelines remains voluntary. However, from 31 December 2012, when an oil and gas company chooses to publish GRI reports, these companies are required to use the oil and gas sector supplement.

The GRI framework consists of i) the sustainability reporting framework, and ii) the sector guidance that assists managers to set goals, measure performance and manage the impact of change (GRI, 2013a). The guidelines set out the standards and principles to report on the three main sustainability issues, namely i) environmental, ii) economic, and iii) social performance. It also focuses on performance indicators that were identified as major issues based on international standards (Caraiani *et al.*, 2012, Crawford & Scaletta, 2005). The GRI framework assists managers in reporting positive performance values that lead to an increase in shareholder value as well as profitability of human, social and environmental capital (Caraiani *et al.*, 2012). The main goal of the GRI framework is to provide a trusted and credible framework, used by any organisation, to clearly and openly report on relevant sustainability issues (GRI, 2013b:9).

The GRI focuses on six important areas that are included in their sector frameworks and general guidelines (refer to Figure 3.1). Three of these areas, economy, environment and society, fit within the triple bottom line context. Labour practices, human rights and product responsibility cannot be considered separately, but rather as an overlap within the other three sustainability areas (Musikanski, 2012). Each of these six areas will be discussed in detail in section 3.4.1.1.

Figure 3.1: GRI sustainability areas

<p style="text-align: center;">ENVIRONMENTAL</p> <p>Materials Energy Water Biodiversity Emissions & waste Products & services Compliance Transport Environmental protection expenditures and investments</p>	<p style="text-align: center;">SOCIAL</p> <p>Community Corruption Public policy Anti-competitive behaviour Compliance</p>	<p style="text-align: center;">ECONOMIC</p> <p>Economic performance Market presence Indirect economic impacts</p>
<p style="text-align: center;">HUMAN RIGHTS</p> <p>Investment & procurement practices Non-discrimination Freedom of association Child labour Forced & compulsory labour Security practices Indigenous rights</p>	<p style="text-align: center;">LABOUR PRACTICES AND DECENT WORK</p> <p>Employment Labour-management relations Occupational health & safety Training & education Diversity & equal opportunity</p>	<p style="text-align: center;">PRODUCT RESPONSIBILITY</p> <p>Customer health & safety Product & service labelling Marketing communications Customer privacy Compliance</p>

(Source: Musikanski, 2012)

Caraiani *et al.* (2012) describe the GRI framework as the best-known and most widely used sustainable framework for triple bottom line reporting. It provides both credibility and accuracy in non-financial reporting (Crawford & Scaletta, 2005).

One of the criticisms against sustainability reporting is the so-called ‘green washing’, where managers only report on favourable information, which is generally self-gathered (Verschoor, 2011). This can be addressed through the GRI guidelines as these determine content in terms of materiality, sustainability, stakeholder relationships and scope. It also ensures the balance of reporting in terms of comparability, accuracy, clarity and reliability (Eccles & Krzus, 2010). The performance indicators and management disclosures in the GRI framework can be used to be more transparent about the organisation’s sustainability performance (Verschoor, 2011). The guidelines include principles that address definitions of *content* as well as the *quality* of the report.

- Content-based principles

These principles focus on the materiality of the content, how the organisation responds and furthermore report on economic, environmental and social challenges. Materiality, as one of the main focuses of the new G4 guidelines, can be defined as information that reflects the organisation's economic, environmental and social impacts, which can have a substantial influence on the assessment and decisions of stakeholders. This focus will encourage organisations to include sustainability in their business strategy (Ligteringen, 2013).

- Quality-based principles

These principles ensure that the report is of sufficient quality for all relevant stakeholders and includes balance, comparability, accuracy, timeliness, clarity and reliability.

3.4.1 CONTENT OF THE OIL AND GAS SECTOR SUPPLEMENT

Sector supplements provide additional guidance to issues not addressed in the general reporting guidelines by covering unique, sector-specific sustainability issues. The sector disclosures for financial services and mining and metals have been updated based on the latest G4 guidelines; however, the oil and gas sector will still be completed based on the G3.1 sector guidelines (GRI, 2013a).

The oil and gas sector supplement, issued by the GRI, assists companies within this sector to report on their sustainability performance. These include issues such as environmental management, health and safety and emergency preparedness. This supplement can be used by companies primarily involved in the exploration, extraction, production, refining and transport and sale of oil, gas and petrochemicals (GRI, 2013b). Since the BP oil spill in the Gulf region in 2010, the sustainability performance of oil and gas companies has been closely scrutinised. It increased the awareness of environmental and social issues as well as higher expectations of transparency and accountability (CIMA, 2012b).

The reporting framework for the oil and gas sector, as identified and discussed earlier, consists of the following two parts (GRI, 2013b);

- Reporting principles and guidance

This section provides guidance and principles regarding i) the selection of content, ii) the quality of the reported information, and iii) setting the report boundaries. Combined, the reporting principles and guidance ensure that transparency exists within the sustainability report.

- Standard disclosure

This section refers to reporting based on i) strategy and profile, ii) management approach, and iii) performance indicators.

As highlighted in the objectives of the study (refer Chapter 1, page 6), the following section will mainly focus on part 2 of the reporting framework, namely the performance indicators used in the sustainability report.

3.4.1.1 Performance indicators

Performance indicators can either be quantitative or qualitative. The quantitative indicators provide comparable information based on the economic, environmental and social performance and outcomes of the organisation. Qualitative performance indicators often refer to a company's policies, procedures or actions regarding social issues, as these indicators cannot always be quantified. It is recommended, where possible, to report on both the quantitative and qualitative elements of the performance indicators as they offer flexibility within the reporting process (IPIECA *et al.* 2010). In each category, these indicators have to be combined with the management approach followed to indicate how the organisation addresses these topics. The disclosure on management approach adds value to these key performance indicators for it provides information regarding predictions of shocks and how to maximise opportunities (Garcia, 2013).

The performance indicators are divided into 'core' and 'additional' indicators. The 'core' indicators are considered to be universal and, if material, can be used by all organisations. The 'additional' indicators address emerging topics that may be material for some organisations under certain circumstances. These performance indicators are categorised into i) economic, ii) environmental, or iii) social indicators and can be identified by the relevant indicator code. The sector supplement includes indicators that were identified as

main reporting issues for the *oil and gas industry*. These indicators can be identified by their unique OG indicator code.

The following section provides an explanation of the three main performance indicators as depicted in the sustainability reporting guidelines and the oil and gas sector supplement (GRI, 2013b). It includes core indicators and fifteen sector-specific indicators as analysed in this study. For a full description of all the performance indicators, as well as additional indicators, refer to Appendix A.

- Economic and social performance indicators

The oil and gas industry faces challenging social and economic issues based on the nature and location of these companies (IPIECA, 2013).

The *economic* dimension of sustainability focuses on the impact, direct and indirect, on the economic systems at local, national and global level. Organisations in the *oil and gas industry* are dependent on limited resources and the development and production of reserves have potential risks and impacts. The GRI added a sector-specific indicator that reports on the volume of reserves and production. Although these are also included in the annual reports, the stakeholders are more interested in the technological and economic risks related to the reserve and production of hydrocarbons and resources such as tar sands and gases. The GRI core and *oil and gas industry* (OG) economic performance indicators are as follows:

Table 3.1 Economic performance indicators

Indicator code	Economic description
EC1	Direct economic value generated and distributed
EC2	Financial implications, risks and opportunities due to climate change
EC3	Coverage of the organisation's defined benefit plan obligations
EC4	Significant financial assistance received from government
EC6	Policy, practices and proportion of local-based spending
EC7	Procedures for local hiring
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit
OG1	Volume and type of estimated proved reserves and production

(Source: GRI, 2013c)

The *social* dimension of sustainability encourages organisations to report on the effective use of community and social investments in the areas they operate in to establish and maintain positive relationships. Health and safety, as one of the most important aspects within the *oil and gas industry*, is spread over different categories as it has multiple connections to environmental, social and economic issues. It addresses risks related to activities such as drilling, facility operations, maintenance, construction and transport. The indicators provide a balance between leading and lagging indicators by providing information regarding systems to improve performance and the outcomes of health and safety risks (IPIECA, 2013). The GRI categorises social indicators into labour practices, human rights, society, and product responsibility. The global oil and gas industry association for environmental and social issues (IPIECA, 2013) includes social investment and local hiring practices when referring to social performance indicators. Local hiring practices describe the actions and implemented programmes to provide employment opportunities for residents in the local community where the oil and gas company operates.

- Labour practices

Employees are key stakeholders who can have an effect on the overall success of the organisation. It is therefore important to put processes and action into place to ensure employee satisfaction. The indicators describe the value of human capital and investment activities such as training and development to ensure a positive company culture, diversity, as well as strong motivation throughout the organisation. It is also important to promote a non-retaliation and grievance system where employees can report anonymously on non-compliance and ethical incidents (IPIECA, 2013). The labour practice and decent work performance indicators, as identified in Table 3.2, are based on internationally recognised universal standards relating to work conditions, occupational health and safety, training and diversity.

Table 3.2 Labour practices and decent work performance indicators

Indicator code	Social description
LA1	Total workforce by employment type, employment contract and region, broken down by gender
LA2	Total number and rate of new employee hires
LA4	Percentage of employees covered by collective bargaining agreement
LA5	Minimum notice period regarding operational changes
LA7	Rates of injury, occupational diseases, lost days, absenteeism and total number of work-related fatalities
LA8	Education, training, counselling, prevention and risk-control programmes in place to assist workforce members
LA10	Average hours of training per year
LA14	Ratio of basis salary and remuneration of women to men

(Source: GRI, 2013d)

- Human rights

A number of oil and gas companies operate in the most challenging locations in the world due to the limited access of raw material, and may face complex human rights-related issues (IPIECA, 2013). These performance indicators require organisations to report on actions and processes that have been implemented to reduce violations and improve awareness of security and human rights in the workplace. These include issues such as non-discrimination, gender equity, freedom of association and child labour. The GRI added a sector-specific indicator that focuses on indigenous communities, which can be described as social groups with different identities from dominant groups in the society and workforce. The performance indicator identifies operations that take place in communities where indigenous people may be affected; it also includes the criteria used to identify these communities. It is important for these companies to engage with these communities and establish plans and agreements to address their concerns and expectations. The following table identifies the GRI human rights performance indicators:

Table 3.3 Human rights performance indicators

Indicator code	Social description
HR1	Percentage and total number of significant investment agreements
HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening and actions taken
HR4	Total number of incidents of discrimination and corrective actions taken
HR5	Operations and significant suppliers identified in which the right to freedom may be violated, and actions taken to support these rights
HR6	Operations and significant suppliers identified as having risk for incidences of child labour
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labour
OG9	Operations where indigenous communities are present or affected by activities and where specific engagement strategies are in place
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments
HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms

(Source: GRI, 2013e)

- Society

Reporting on society relates to the impact the organisation has on the local community in which they operate. It also includes possible risks and prevention activities to reduce these risks. The management of these impacts is vital for the building of trust and confidence within the affected stakeholder group, for the lack thereof can lead to project disruption, delays, increased cost and employee intervention (IPIECA, 2010). The society performance indicators, as stipulated in Table 3.4, refer to aspects such as bribery, corruption and compliance to local laws and regulations. The sector indicators ensure that organisations report on:

- significant disputes with the local community, defined in terms of parties involved and current resources, with regard to the use of land and the impact on cultural heritage;
- decommissioned sites where processes and actions are put into place to ensure that operation sites are safe or to ensure that environment remediation is successfully implemented; and
- processes to avoid or limit involuntary resettlement.

Table 3.4 Society performance indicators

Indicator code	Social description
SO1	Percentage of operations with implemented local community engagement
SO9	Operations with significant potential or actual negative impacts on local communities
SO10	Prevention and mitigation measures on negative impacts on local communities
OG10	Number and description of significant disputes with local communities and indigenous people
OG11	Number of sites that have been decommissioned and sites that are in the process of being decommissioned
SO2	Percentage and total number of risks related to corruption
SO3	Percentage of employees trained in organisation's anti-corruption policies and procedures
SO4	Actions taken in response to incidents of corruption
SO8	Monetary value of significant fines for non-compliance with laws and regulations
OG12	Operations where involuntary resettlement took place, the number of households resettled in each and how their livelihoods were affected in the process
OG13	Number of process safety events by business activity

(Source: GRI, 2013f)

- Product responsibility

Product responsibility indicators address the effect that oil and gas products and services have on the customer. It includes information regarding health and safety, labelling, marketing, privacy and substitute products. The GRI sector indicator ensures that managers report on the sustainable production and purchase of biofuels. The product responsibility performance indicators are as follows:

Table 3.5 Product responsibility performance indicators

Indicator code	Social description
PR1	Lifecycle stages in which health and safety impacts of products and service are assessed
PR3	Type of product and service information required by procedures
PR6	Programmes for adherence to laws, standards and voluntary codes related to marketing communications
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of product and services
OG14	Volume of bio-fuels produced and purchase meeting sustainability criteria

(Source: GRI, 2013g)

- Environmental performance indicators

The environmental dimension focuses on the organisation’s impact on natural systems, which include ecosystems, land, air and water and also recognises the challenges and risks associated with climate change (IPIECA, 2013). The GRI included indicators, set out in Table 3.6, which report on the performance related to biodiversity, environmental compliance, environmental expenditure and the impact of petroleum products thereon. The oil and gas sector faces many environmental challenges and therefore the GRI included seven sector indicators, which may assist managers to effectively evaluate the environmental performance of the company.

Table 3.6 Environmental performance indicators

Indicator code	Environmental description
EN1	Materials used by weight or volume
EN2	Percentage of materials used that are recycled input materials
EN3	Direct energy consumption by primary energy source
OG2	Total amount invested in renewable energy
OG3	Total amount of renewable energy generated by source
EN4	Indirect energy consumption by primary source
EN8	Total water withdrawal by source
EN9	Water sources significantly affected by withdrawal of water
EN11	Location and size of protected areas and areas of high biodiversity value outside protected areas
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas
EN14	Strategies and future plans for managing impacts on biodiversity
OG4	Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored
EN16	Total direct and indirect greenhouse gas emissions by weight
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved
EN19	Emissions of ozone-depleting substances by weight
EN20	NO _x , SO _x and other significant air emissions by type and weight
EN21	Total water discharge by quality and destination
OG5	Volume of formation or produced water
EN22	Total weight of waste by type and disposal method
EN23	Total number and volume of significant spills
OG6	Volume of flared and vented hydrocarbon
OG7	Amount of drilling waste and strategies for treatment and disposal
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impacts mitigation
OG8	Benzene, lead and sulphur content in fuels

EN27	Percentage of products sold and their packaging materials that are reclaimed by category
EN28	Monetary value of significant fines for non-compliance with environmental laws and regulations

(Source: GRI, 2013h)

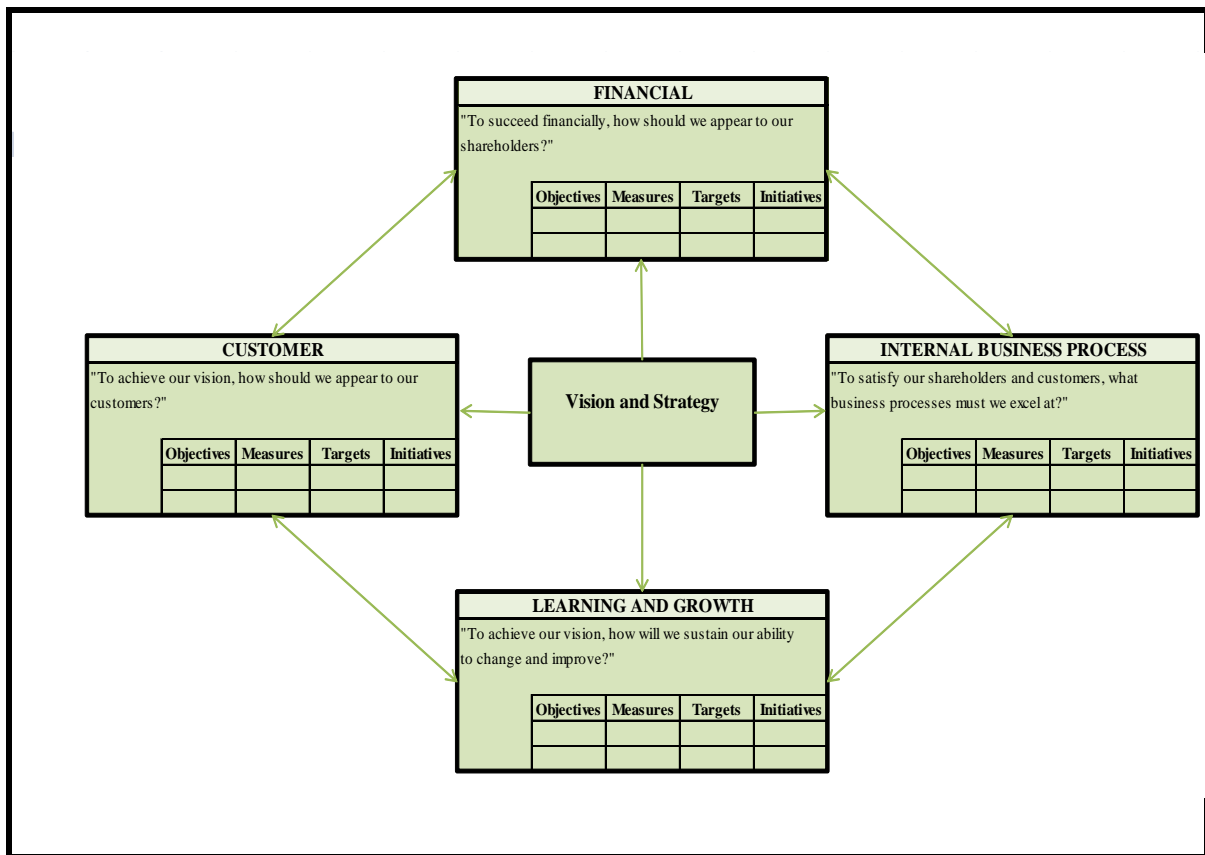
The above-mentioned indicators were used to analyse and identify performance indicators used in the integrated report of the oil and gas companies included in the research sample (refer Chapter 2, page - 14 -). These GRI performance indicators together with disclosure on management approach were used to develop a sustainable balanced scorecard.

3.5 BALANCED SCORECARD

The balanced scorecard (BSC), which was mainly developed for internal reporting, has been effectively used as a professional management accounting innovation, since Kaplan and Norton introduced it to the business world in 1992 (Caraiani *et al.*, 2012). Rohm and Montgomery (2011) describe the balanced scorecard as a connection between i) organisational capacity, ii) customer value, iii) stakeholder satisfaction, iv) sustainability performance, v) efficient business processes, and vi) financial and market outcomes.

This performance measurement tool, which celebrated its 20th anniversary in 2012, has been proven to be one of the most influential business management strategies of the last 20 years (Rohm & Montgomery, 2011). The BSC consists of four performance dimensions, as shown in Figure 3.2 (Groot & Selto, 2013; Figge *et al.*, 2002):

Figure 3.2 Four perspectives of the BSC



(Source: Kaplan, 2010)

1. Financial

The financial perspective represents the economic consequences of performance measured by financial and accounting indicators. It monitors the shareholder's perspective and provides assurance that the shareholders' interests are sufficiently taken care of. It is also the end result of the causal relationship between the other BSC perspectives.

2. Customer

The customer perspective represents the firm's performance in the market segments in which it competes. Research shows that there is a positive relationship between customer satisfaction and financial performance. On the other hand, the cost to improve customer satisfaction may exceed the benefit of financial performance. Managers should therefore recognise whether the cap of customer satisfaction has been reached, because continued efforts to improve already satisfied customers may lead to financial losses.

3. Internal business process

The internal business process perspective reports on the condition and performance of critical business functions that are important in the value creation process. Outcome indicators can be focused on product quality, product functionality, timeliness, production, delivery, and process improvements. These processes enable the firm to meet customer and shareholder expectations.

4. Learning and growth

The learning and growth perspective depicts the condition of the organisation's capabilities most critical for current and future performance. Organisations need to maintain and improve their capabilities in order to survive in today's competitive markets and meet their long-term objectives. Organisational capabilities are built on human capabilities, technical capabilities as well as organisational capabilities. It also refers to the infrastructure that is needed to achieve the objectives in the other BSC perspectives.

The BSC was developed to provide a broad scope of financial and non-financial information. This will assist managers in making short- and long-term decisions by providing a balanced view of the overall performance of the organisation (Groot & Selso, 2013; CIMA, 2012b). It is based on the assumption that the effective use of investment capital is no longer the main reason to gain competitive advantage, but rather a combination of 'hard' and 'soft' factors such as intellectual capital, knowledge creation and good customer relations (Figge *et al.*, 2002).

The main purpose of the BSC is to find the right combination of measures to develop a complete scorecard that will effectively support decision-making and control processes. There has to be a balance in the importance of:

- i. Performance perspectives;
- ii. Leading and lagging indicators;
- iii. Internal and external indicators;
- iv. Subjective and objective measures; and
- v. Short- and long term measures (Groot & Selso, 2013).

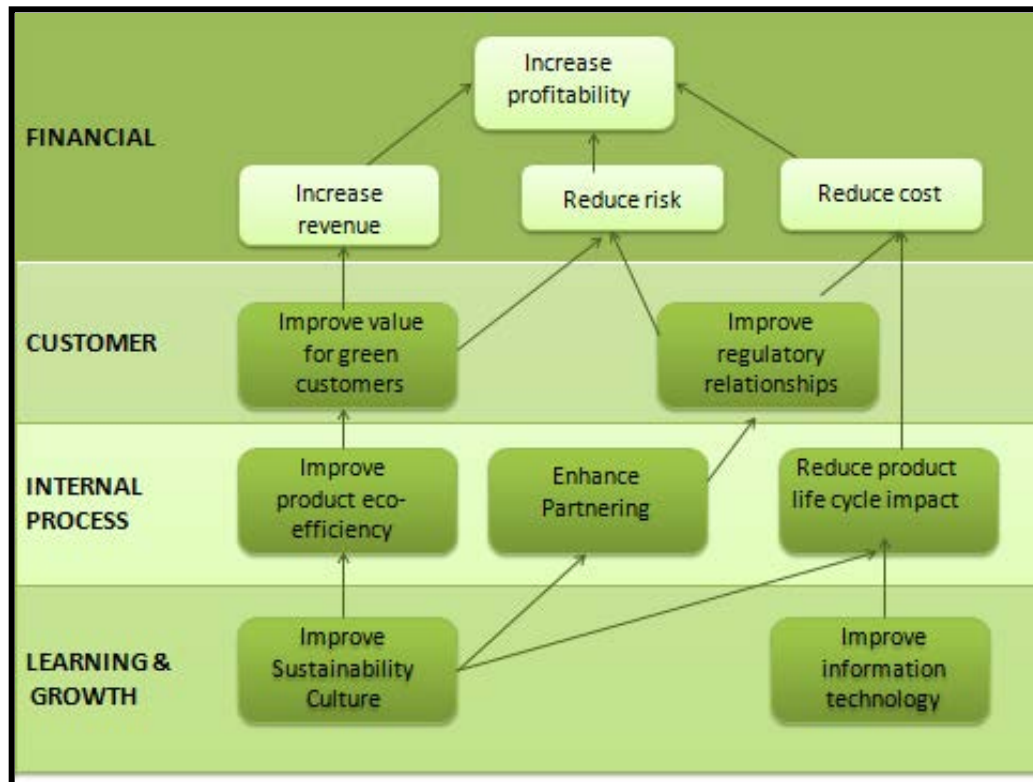
Despite the positive feedback and accomplishments of the BSC, researchers recognised that sustainability objectives have been largely neglected within the BSC perspectives (Hansen & Schaltegger, 2012). PricewaterhouseCoopers (PwC) reported that 71% of listed companies consider sustainability issues in their strategic discussions (Harland, 2013). This, together with the importance of environmental reporting, increased the need to incorporate sustainability impact perspectives in the BSC, and furthermore reassure managers that the balanced scorecard is not solely profit driven (Jones, 2011). The BSC can therefore be used as a basis for many structures to incorporate sustainability measures into the organisation's strategic performance measurement systems (Gates & Germain, 2010). It is important to consider the wider population affected by the organisation, from the direct customer to the supplier, as well as to identify the particular groups in society that will be affected, either directly or indirectly by organisation activities (Jones, 2011).

It is also important to distinguish between leading and lagging indicators, which reflect the cause-and-effect relationship between measurements. Financial performance indicators are lagging indicators that indicate whether the objectives within the other perspectives were achieved. The leading indicators, which can be seen as performance drivers, are firm specific and reflect how these objectives should be achieved. Selecting the right leading and lagging performance indicators clarifies and translates vision and strategy, it communicates the strategy to other business units and provides feedback for improvement and learning (Groot & Selso, 2013; Figge *et al.*, 2002).

According to Serwiniwski (2010), sustainability performance is highly regarded by analysts and socially responsible investors as a key indicator of the overall quality management of an organisation. The BSC can be used as a framework for reporting triple bottom line indicators, as it clearly illustrates the casual effect between the indicators that distinguish a good corporate business from a successful one (Crawford & Scaletta, 2005). A strategic performance BSC aligns the business activities with the corporate vision and strategy, and communicates these strategies throughout the organisation and to external stakeholders (Rohm & Montgomery, 2011). A strategy map can be used, which represents the main objectives of the organisation and shows how these objectives will be obtained. A strategy map therefore shows the link between performance dimensions and performance measures. It is developed based on the assumption that creating economic value is the main goal of the organisation, which is supported by performance in the other

BSC dimensions (Groot & Selso, 2013). A strategy map (refer Figure 3.2) is a visual illustration of the casual effect of the four principles and how strategic objectives are achieved. Rohm and Montgomery (2011) explain this concept based on a sustainability theme.

Figure 3.3: A generic sustainability strategy map



(Source: Rohm & Montgomery, 2011)

By implementing sustainability into the learning and growth activities of the organisation, it will align the employees to develop, manufacture and support eco-efficient products. It will also encourage managers to effectively partner with regulators and it will reduce the lifecycle impact of the organisation's operations. These changes may lead to innovations to create new information technology that will help to track the lifecycle impacts of the organisation's activities. The production of more eco-efficient products will provide value to the sustainable customer target group, which will increase the sales. The partnership with regulators allows the organisation to be an active player in the sustainable community and will reduce business risk, which will directly influence the cost of capital. All of the above benefits, increased revenues, reduced risk and cost, will have a positive impact on

the profitability of an organisation. The BP Gulf of Mexico episode in 2010 is a good example of how environmental and social issues can have a direct effect on the share price as well as the organisation's reputation with investors, the community and shareholders (Jones, 2011).

One of the biggest problems identified by Jones (2011), when managers start to incorporate sustainability into the BSC, is that they simply add it as an additional perspective. According to Jones (2011), this will lead to an unstructured collection of sustainable issues with the consequence of three main problems:

- Sustainability issues are being separated from the general business perspectives instead of integrating sustainability into the business environment;
- Little or no attention is paid to the causes, possible solution or precaution methods to address the environmental and social impact; and
- This will influence the validity and credentials of the cause-and-effect relationship of the strategy map and BSC.

It is therefore important to evaluate relevant performance dimensions that should be included in the BSC based on two questions:

1. Which stakeholders' interests are important to the organisation?
2. What are the critical performance areas that must be explicitly monitored and controlled? (Groot & Selso, 2013).

To ensure that environmental and social issues are effectively incorporated within the business strategy, managers should identify the drivers and the impact that social and environmental issues have on the other perspectives. Jones (2011) focuses on the cause-and-effect relationship between the four perspectives. The organisation's financial objectives will be achieved once customers' (from the customer perspective) needs are satisfied, and this can be achieved through effective processes and learning (process and learning and growth perspective) within the organisation. Managers should bear in mind that just as revenue and costs are consequences of activities, so is environmental and social impact. The lower level perspectives identify the actions and activities that the organisation implements to improve the environmental and social results. Managers need sufficient information from the process perspective to know how and where to limit the

environmental impact. Managers can also gain valuable information from the learning and growth perspective, namely which skills, knowledge, behaviour and experience are needed to achieve environmental and social objectives (Jones, 2011).

Gates and Germain (2010) identify four ways in which environmental and social issues can be incorporated into the BSC:

- i. Environmental and social indicators can be partially linked to the four perspectives without creating an additional perspective dedicated to sustainability measures;
- ii. The indicators can be completely linked to the four perspectives that are usually used together with the GRI guidelines;
- iii. A fifth dimension, society, can be incorporated, which takes non-market environmental and social issues into consideration; and
- iv. An additional BSC can be developed focusing on sustainable issues.

Making adjustments to the traditional BSC by using an effective social responsibility framework, such as the GRI, will ensure that managers implement more strategic environmental activities by making more strategic environment decisions (Caraiani *et al.*, 2012).

3.6 SUMMARY

The aim of this chapter was to address two of the secondary objectives as set in Chapter 1 (refer page 6). In this chapter, information regarding the oil and gas sector and the environment was therefore provided followed by an explanation of the history, development and value of integrated reporting.

An analysis of the GRI sustainability framework and oil and gas sector supplement was performed. The performance indicators ‘core’ and ‘sector’ were identified as being material to companies and therefore used as basis to identify performance indicators used in the integrated reports of the companies within the research sample. An overview was also provided regarding economic, social and environmental performance indicators.

The balanced scorecard was introduced, which, together with the GRI performance indicators, will be used to develop a sustainable balanced scorecard.

The next chapter will be presented in the form of a research article, which will include important information and principles discussed in the previous chapters. The chapter will include the empirical analysis of the sampled companies, as well as the results and information regarding the formulation of a sustainable balanced scorecard.

CHAPTER 4

DEVELOPING A SUSTAINABLE BALANCED SCORECARD FOR THE OIL AND GAS INDUSTRY

ABSTRACT

The oil and gas industry is a multifaceted, global industry that has a fundamental impact on safety, health, environmental and social issues. The objectives of this study was twofold; firstly, key performance measurements as published in the integrated reports of oil and gas companies were identified and compared to the GRI sector supplement indicators, and secondly, these measurements were evaluated according to the four principles of the balanced scorecard. The contribution of the study was the development of a sustainable balanced scorecard for the oil and gas industry. The integrated reports of the oil and gas companies listed on the JSE Limited were analysed. It was found that selected oil and gas companies include sustainability issues in their integrated reports with a focus on social aspects. It is recommended that these indicators, together with the GRI sector supplement, should be incorporated with the conventional balanced scorecard measurements to ensure that sustainability is linked to the financial and overall objectives of the company.

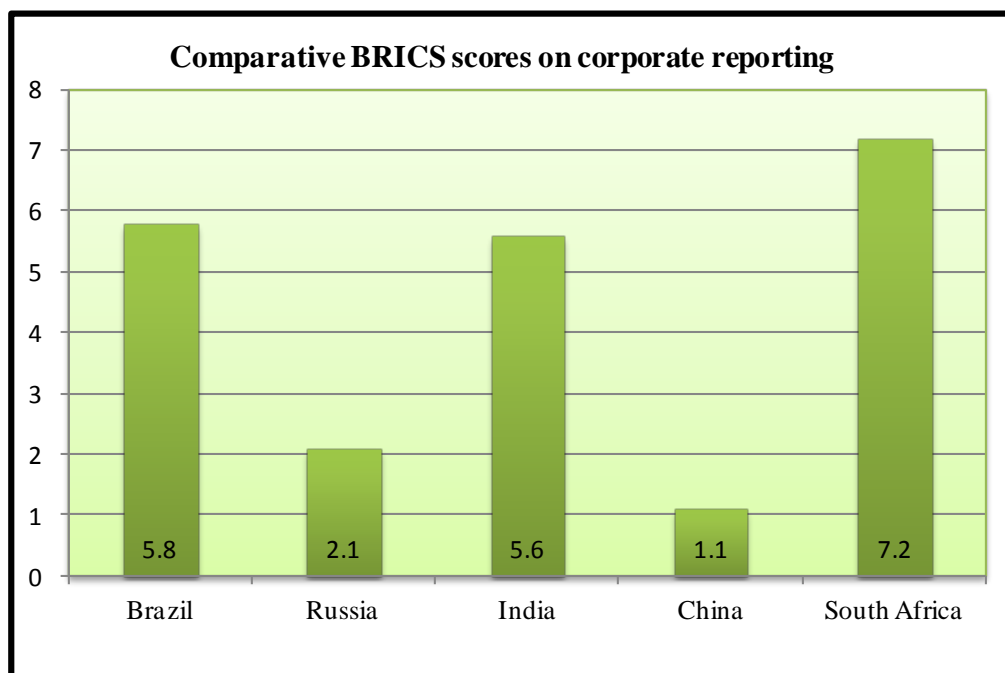
Keywords: Sustainability, integrated reporting, oil and gas sector, GRI

4.1 BACKGROUND

The global, competitive business environment in which organisations operate has increasingly become more turbulent as a result of the 2008 financial crisis that led to a global market meltdown. It increased the pressure on companies to evaluate political and economic risks, the effect of changing laws and regulations and to adjust for long-term sustainability (Gibbons *et al.*; 2010, Holmes, 2012; Eccles & Krzus, 2010). Managers also face challenges regarding resource limitations and changes in customer and stakeholder demand (Gibbons *et al.*, 2010; Kiewa, 2011). Organisations in all sectors recognised these challenges and are in the process of changing their structure and strategies to act with integrity and to ensure a sustainable, competitive business environment (Eccles & Krzus, 2010). Global investors also started to use sustainability elements as criteria in investment analyses based on the belief that these elements drive financial returns (Gibbons *et al.*, 2010).

South Africa, as an emerging market, officially became a member of the BRICS (Brazil, Russia, India and China) countries in 2010 by virtue of the country's vast natural resources, established corporate footprints, culture of innovation and easy access to business relations in the rest of the African continent (Pinto, 2012). Research undertaken by the Cambridge University Programme for Sustainability Leadership indicated that South African companies, with an average of 7.2, scored the highest on corporate reporting compared to the other BRICS countries (see Figure 4.1). The comparative BRICS scores on corporate reporting are based on four sectors: philanthropy, ethics, environment and human resources (Gibbons *et al.*, 2010).

Figure 4.1: Corporate reporting of BRICS countries



(Source: Adapted from Gibbons *et al.*, 2010)

“Whilst the world’s population is increasing, we continue to use the natural assets of planet earth faster than nature can regenerate them.” These are the words from professor Mervyn King, former chairman of the Global Reporting Initiative (GRI) and current chairman of the International Integrated Reporting Council (IIRC) that led to the JSE Limited (JSE) being the first global stock exchange to compel listed companies to integrate sustainability reporting with their annual report (Gibbons *et al.*, 2010). South Africa is therefore recognised as one of the global leaders in sustainability reporting and integrated reporting (King, 2013).

The paper will be organised as follows: Firstly, the problem statement and research objectives will be discussed, followed by the presentation of the research method. Next, the literature review will cover sustainability and the balanced scorecard (BSC). The results will be presented, and finally the paper will conclude with recommendations, limitations to the research and identified areas for further research.

4.2 PROBLEM STATEMENT AND RESEARCH OBJECTIVES

As highlighted above, the measurement of sustainability is becoming imperative for South African companies. To exacerbate the requirement for sustainability measurement even

further, is the JSE requirement of an annual integrated report that includes economic, social and environmental issues. Research found that organisations failed to effectively integrate non-financial measurements with their financial performance (Holmes, 2012:30; Caraiani *et al.*, 2012; Tilley, 2012). The number of oil spills and the impact of the oil and gas companies' operations on climate change have increased the investors and general public's awareness of these companies' sustainability practices. Therefore, sustainability has become increasingly important for the oil and gas sector over the last number of years. Furthermore, the oil and gas sector is one of the key players in the South African economy, manufacturing more than 90% of South Africa's petroleum products, supporting employment to over 100 000 people and selling approximately 24.9 billion litres of petroleum products annually (SAPIA, 2013).

In 2010, the oil and gas industry was the second highest sector to submit reports to the Global Reporting Initiative (GRI). The GRI, a non-profit organisation, created a set of sustainable guidelines that can be used to measure and manage organisational sustainability. They announced that from 31 December 2012, all GRI reports published by organisations in the oil and gas sector are required to use the oil and gas sector supplement that addresses specific sustainability issues in the industry.

Although a great deal of research (Figge *et al.*, 2002:269; Jones, 2011; Rohm & Montgomery, 2011) has been conducted regarding sustainability and the BSC, the opportunity still exists for specific research in the South African *oil and gas industry* with regard to integrated reporting and the GRI framework. This research aims to fill this knowledge gap.

One of the greatest challenges for the oil and gas industry is to continually find and provide products that are both environmentally and socially responsible, while simultaneously contributing to global economic and social development (IPIECA, 2013). During the research process, it became evident that although oil and gas companies develop strategic objectives to ensure their sustainability, they lack the knowledge to effectively link their key performance indicators to the company's future strategies, targets and goals and to report on all three pillars of sustainability.

Considering the increasing sustainability challenges for oil and gas companies, the question can be asked whether a sustainable balanced scorecard, based on the principles of the GRI framework, can assist managers with their integrated reporting process.

The problem statement can therefore be summarised as: What sustainability performance measurements do managers use in their integrated report? Furthermore, can these measurements be used to develop a sustainable balanced scorecard (SBSC) to ensure that sustainability is effectively linked with the organisational goals and objectives?

Firstly, key performance measurements, as published in the integrated reports, have to be identified and compared to the GRI sector supplement indicators. The GRI framework will be utilised as it provides a trusted and credible framework that can be applied by any organisation in any sector, to clearly and openly report on relevant sustainability issues. Secondly, these measurements have to be evaluated according to the four principles of the balanced scorecard.

To highlight the relevance of the BSC, Sasol, one of the sampled companies, is in the process of developing a balanced scorecard that will mainly be used for internal use (Wandrag, 2013). The contribution of this study is the development of a sustainable balanced scorecard (SBSC) for the *oil and gas industry*.

4.3 RESEARCH METHOD

An observational, *ex post facto* and descriptive research methodology has been used to address the stated objectives. Furthermore, content analysis of the integrated reports was conducted analysing both quantitative and qualitative data, as the integrated reports consist of financial and non-financial information. The research was performed based on all the JSE-listed companies in the *oil and gas industry*, as this industry faces numerous sustainability challenges. Furthermore, all JSE-listed companies have been required to issue integrated reports since 2010. Therefore, the integrated reports for both 2011 and 2012 were obtained from the respective companies' websites in order to compare the reports and to identify improvements and changes in their sustainability management. The performance measurements identified in the integrated reports were compared against the G3.1 *Oil and Gas Sector Supplement* indicators.

The sample consisted of all the companies in the *oil and gas industry*, namely: Oando plc, Sacoil Holdings and Sasol Ltd.

Oando plc is the largest integrated energy solutions group in sub-Saharan Africa that focuses on upstream, midstream and downstream activities (Oando, 2012). Sacoil Holdings, on the other hand, is a leading independent African company that focuses on upstream activities only (Sacoil, 2011).

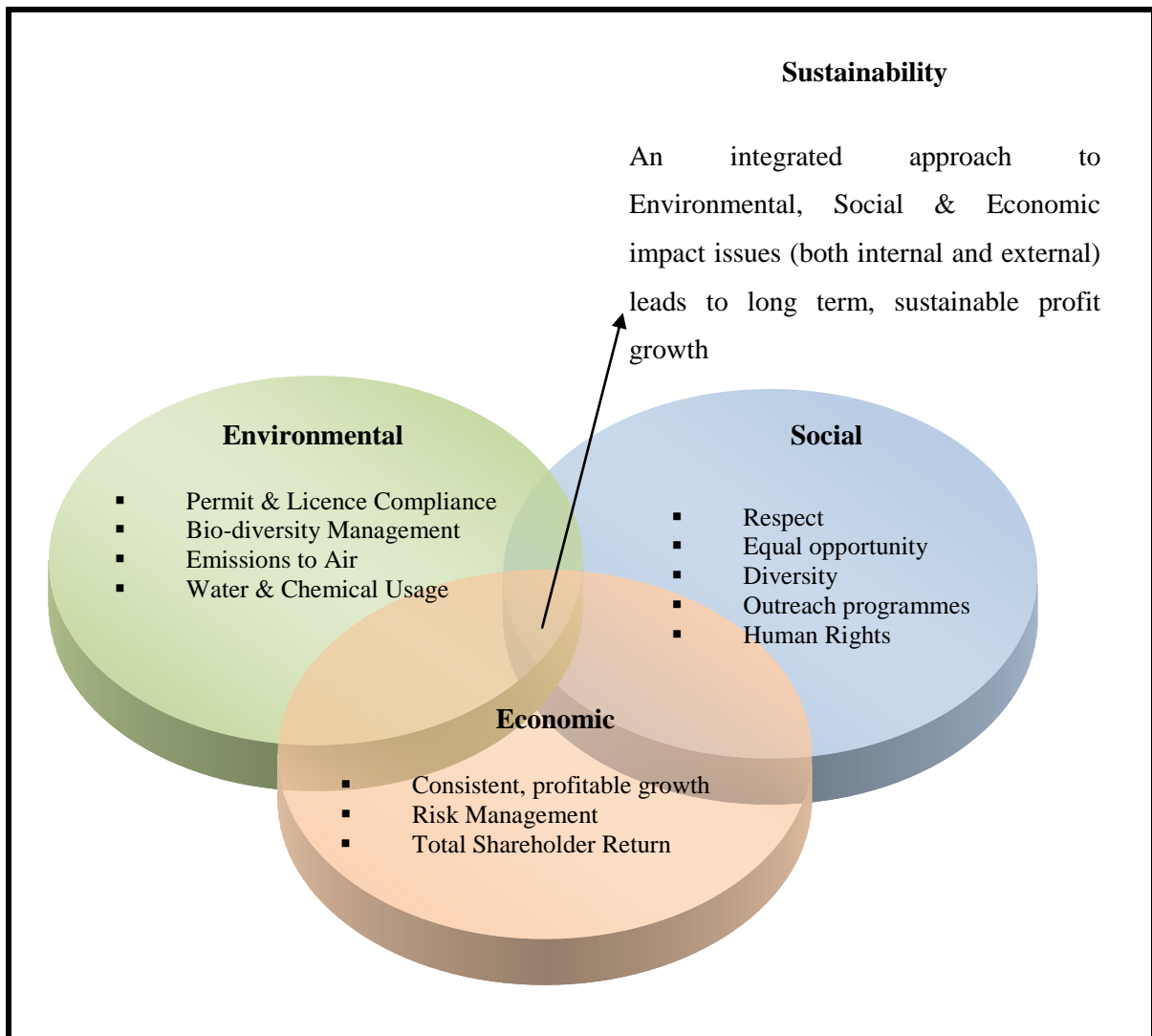
Sasol, as the largest company in this sector, is an international integrated energy and chemical company. It is also the largest coal-to-chemicals producer in the world (Southafrica.info, 2012). In the last two years, Sasol's competitive advantage weakened as a result of cheaper chemical imports and the removal of import duties on polymers in January 2012 (Sasol, 2013). These challenges led to a strategic shift towards higher-value products, greater customer service and innovation.

4.4 LITERATURE REVIEW

4.4.1 Sustainability

Sustainability, as one of the leading performance indicators, has become increasingly important in the oil and gas industry as well as in the general business environment. The concept of sustainability is based on social, economic and environmental performance, and can be described as development that satisfies the needs of stakeholders today, without compromising the future generations' ability to satisfy theirs (Anon, 2011). Caraiani *et al.* (2012) describe sustainable performance as a concept designed on the principles of the balanced scorecard together with key indicators of sustainability. Figure 4.2 illustrates the key elements of sustainability and how these elements are interlinked with one another (verifysustainability, 2013).

Figure 4.2: Sustainability dimensions



(Source: Adapted from verifysustainability, 2013)

Companies started to report on sustainability issues mainly because of the reputational benefits and to avoid the risk of legislative penalties for non-compliance (Smith, 2013). Nowadays, the risk of strikes and violent protests by employees and communities also raises the issue of adequate social performance measures (Smith, 2013). According to Smith (2013), miscalculation of sustainability information is one of the main reasons for the major market collapses during the past few years. Managers will also remain unaware of the extent to which these sustainable measurements impact the financial performance of a company (Hansen & Schaltegger, 2012). It is therefore important to understand that sustainable business practices include processes that deliver sustainable outcomes for all relevant stakeholders over the long term (Kiewa, 2011). In the past few years, formal attention to sustainability and corporate social responsibility (CSR) strengthened with the

introduction of global regulations and guidelines such as the Dow Jones Sustainability Index, Integrated Reporting and GRI Guidelines (Gibbons *et al.*, 2010).

The Dow Jones Sustainability Index (DJSI), which was launched in 1999, is the world's first sustainability benchmark index for leading companies that focus and report on economic, social and environmental issues (DJSI, 2013). The most common definition of corporate sustainability, as created by the Dow Jones Sustainability Index, implies that sustainability creates long-term shareholder value by identifying and managing economic, environmental and social opportunities and risks. Previously, sustainability was used to describe long-term environmental and human activities and corporate social responsibility (CSR) only addressed the social impact of the organisation. Nowadays, these two terms are used interchangeably (Rohm & Montgomery, 2011; Kiewa, 2011).

In today's integrated business environment, it is difficult to exclusively use financial information because it focuses on short-term goals and ignores the reasons why certain variations in financial performances occur. This is the reason why the International Integrated Reporting Council (IIRC) developed an International Reporting (IR) framework that assists managers in incorporating sustainability into annual reporting and to effectively communicate how an organisation is really performing (Holmes, 2012). It will include financial statements as well as sustainability reports that will inform stakeholders on how the organisation's strategies are linked to performance measurements to create value over the short-, medium- and long term (IIRC, 2013). A sustainability report therefore provides a format for managers to improve the quality of the organisation's integrated economic, social and environmental objectives for the relevant communities, stakeholders and practitioners (Caraianni *et al.*, 2012). The ability to quantify the value that sustainability contributes to the business and the contribution the business makes to the wider environment is an important part of sustainable reporting (Holmes, 2013).

According to Eccles and Krzus (2010), one of the biggest challenges for companies is to incorporate non-financial information into their mandatory financial standards. Sustainability indicators are usually qualitative and therefore managers face an immense challenge to assign financial values to these indicators (Caraianni *et al.*, 2012). There is also an increasing need for a global framework that managers can use as a benchmark to identify their sustainable performance measurement.

The GRI identified these global challenges and launched their first Sustainability Reporting Framework in 2000, with the latest G4 launch in May 2013 (GRI, 2013a). The framework focuses on three important areas, namely the economy, environment and society. It further elaborates on labour practices, human rights and product responsibility as part of the social dimension of sustainability. The main goal of the GRI framework is to provide a trusted and credible framework, used by any organisation, to clearly and openly report on relevant sustainability issues (GRI, 2013b:9). The GRI also provides sector supplements that focus on sector-specific performance measurements to address the unique sustainability issues.

The sustainability reporting guidelines of the GRI can therefore be used as a framework to assist managers in developing an integrated report, as the IIRC frequently refers to these guidelines for further criteria or understanding. The IIRC also recently signed an agreement with the GRI to strengthen their co-operation in sustainability reporting. The first version of the newly-developed integrated reporting framework will be published in December 2013 (Furber, 2013).

According to Peter Bakker, president of the World Business Council for Sustainable Development, managers and accountants can make a difference in the business environment by ensuring that sustainability becomes more measurable and tangible through integrated reporting (Babber, 2012/2013). Organisations need to develop sustainable strategies that clearly record the links between their strategy, governance, financial performance and social, environmental, and economic context within which they operate. According to Mervyn King, governance, strategy and sustainability are factors that are inseparable (Gibbons *et al.*, 2010). These standards cannot be dealt with in isolation as they need to improve transparency and materiality. To achieve this sustainable business success, an effective performance management system needs to be implemented and controlled (Babber, 2012/2013).

Although sustainability reporting is still voluntary, integrated reporting is becoming more important for stakeholders and the business environment in which organisations operate. A study by Van Zyl (2013) found that although many South African companies claim to create integrated reports, the understanding of what it should represent and the level of integration is still very low. Therefore, the GRI together with the balanced scorecard (BSC) can be used as a starting point to integrate environmental and social aspects into the

main management system and to effectively support strategic decision-making and control (Groot & Selto, 2013:9; Figge et al., 2002:269).

4.4.2 Balanced scorecard (BSC)

The BSC, designed by Kaplan and Norton, celebrated its 20th anniversary in 2012 and has been proven to be one of the most influential business management strategies of the last 20 years (Rohm & Montgomery, 2011). This performance measurement tool is based on the assumption that companies can gain a competitive advantage when they focus both on quantifiable ‘hard’ factors and ‘soft’ factors such as employee knowledge and customer relations (Schaltegger & Ludeke-Freud, 2011). The balanced scorecard focuses on four perspectives, which include:

1. financial measurements,
2. the customer,
3. internal processes, and
4. innovation and learning within the organisation.

According to Groot and Selto (2013), the balanced scorecard is a performance measurement system that not only assesses historical performance, but also allows managers to predict and control future outcomes by influencing performance drivers. The main purpose of the BSC is to find the right combination of measures to develop a complete scorecard that will effectively support decision-making and control processes. Nevertheless, despite all of the benefits of the BSC, researchers recognised that the incorporation of sustainability issues has been neglected, and therefore needs to be adapted to the changing business environment (Hansen & Schaltegger, 2012).

The new concept of a sustainable balanced scorecard (SBSC) can be described as a traditional BSC that integrates economic, environmental and social issues that aim to transform the ‘soft’ factors into long-term strategic goals and contribute to sustainability in an integrated way (Figge *et al.*, 2002).

The integration of the sustainability element into the general business management of the company may have both positive and negative implications on the company’s profitability. Contributing to social community development programmes and establishing a ‘green’,

sustainable image to customers and investors may lead to an increase or decrease in profitability. The following positive implications are offered:

- Sustainability management that will not be dependent on the overall success of the firm;
- Firms may gain a competitive advantage and may be used as a benchmark for other marker-related firms;
- Identify existing environmental and social challenges;
- Increase transparency; and
- Identify valuable cause-and-effect relationships between sustainable aspects and financial targets (Figge *et al.*, 2002; Hansen & Schaltegger, 2012).

On the other hand, these sustainable practices may reduce profitability compared to the increased costs to comply with environmental, health and safety (EHS) regulations and processes to increase product sustainability. Sustainability is usually measured in non-monetary terms, which makes it difficult to integrate with traditional financial measures (Butler *et al.*, 2011).

Butler *et al.* (2011) suggest that a BSC framework will assist managers in addressing these issues as it will align sustainability with the corporate strategies of the company. Although sustainability consists of economic, environmental and social issues, the incorporation of sustainability into the BSC only focuses on environmental and social measures as most economic factors are already addressed in the financial perspective of the BSC.

Sustainability can be incorporated within the BSC by means of three possibilities (Figge *et al.*, 2002):

- i. Integrating environmental and social measures in the existing four perspectives;
- ii. Including an additional non-market perspective into the BSC; and
- iii. Formulating a unique BSC that addresses environmental and social issues.

Integrating environmental and social measures in the existing four perspectives

The identified environmental and social indicators, targets and initiatives have to be integrated into the conventional four BSC perspectives (Schaltegger & Lüdeke-Freund, 2011). This method is also known as subsumption.

The integration of sustainability into the BSC will provide a framework to evaluate and ensure that sustainability is part of the day-to-day processes of the company. It also emphasises the cause-and-effect relations between sustainability and corporate strategies (Butler *et al.*, 2011).

Including an additional, non-market perspective into the BSC

Environmental and social aspects are not always fully integrated into the market price of *oil and gas* companies as they are classified as market externalities. Therefore, an additional non-market perspective may be needed, as all other BSC perspectives are market based (Figge *et al.*, 2002). Sustainability performance indicators that have an influence on the companies' performance, whether directly through the financial perspective or indirectly through the other three BSC perspectives, are included in this additional perspective (Schaltegger & Lüdeke-Freund, 2011). Butler *et al.* (2011) argue that by adding this additional perspective, it may weaken the companies' commitment to sustainable practices as this BSC does not provide clear cause-and-effect linkages between sustainability and the conventional scorecard.

Formulating a unique BSC that addresses environmental and social issues

This approach, also known as deduction, can only be used in conjunction with one of the two approaches discussed above. This SBSC draws the attention away from the conventional BSC and further organises, co-ordinates and differentiates environmental and social aspects. It emphasises a company's commitment to corporate sustainability and therefore cannot be used independently, but rather as an extension to the existing BSC (Figge *et al.*, 2002, Butler *et al.*, 2011).

According to Figge *et al.* (2002), it is important to formulate an SBSC for a specific business unit and then to identify environmental and social aspects that are strategically relevant to that business unit. The GRI can assist managers in this process by providing a

framework with a variety of performance indicators and sector-specific indicators (Figure 4.3). The social exposure of a business unit is more complex to determine as it is usually associated with the company’s corporate social responsibility and not unit specific. It is therefore appropriate to classify the social performance indicators according to the stakeholders involved, whether they are involved with direct material exchange flows or whether they are indirect stakeholders from the community (Figge *et al.*, 2002).

Figure 4.3. Strategic relevance of environmental and social aspects

	Environmental exposure							Social exposure							
								Direct stakeholders				Indirect stakeholders			
	Emissions	Waste	Material input	Noise and vibration	Waste heat	Radiation	Land use	Internal	Along the value chain	In the local community	Societal	Internal	Along the value chain	In the local community	Societal
Strategic core issues (lagging indicators)															
Performance drivers (leading indicators)															

(Source: Figge *et al.*, 2002).

The SBSC, when fully implemented, provides a framework for managers that expresses long-term organisational strategies, both financial and non-financial, that are linked to sustainability (Butler *et al.*, 2011).

4.5 RESULTS

The main objective of this study is to determine whether a sustainable balanced scorecard can assist petroleum companies with their integrated reporting. The starting point was to determine whether the GRI *sector supplement* indicators were used during the reporting

process. The JSE oil and gas industry companies' integrated reports were therefore analysed to establish this. The results are highlighted in Table 4.1.

Table 4.1. Oil and Gas Sector Supplement indicators

	Sasol		Sacoil		Oando	
	2011	2012	2011	2012	2011	2012
ECONOMIC						
OG 1	✓	✓	x	x	x	x
ENVIRONMENT						
OG2	✓	✓	x	x	x	x
OG3	✓	✓	x	x	x	x
OG4	✓	✓	x	x	x	x
OG5	✓	✓	x	x	x	x
OG6		✓	x	x	x	x
OG7	✓	✓	x	x	x	x
OG8	✓	✓	x	x	x	x
SOCIAL						
OG9	✓	✓	x	x	✓	✓
OG10	✓	✓	x	x	x	x
OG11	✓	✓	✓	✓	x	x
OG12	✓	✓	x	x	x	x
OG13	✓	✓	x	x	✓	✓
OG14	✓	✓	x	x	x	x

(Source: Own calculation based on data obtained from Sasol, Sacoil & Oando, 2011/2012)

Sasol, as the largest and leading company in this sector, is the only company that reports on all 14 sector-specific indicators. Although they do not address all the above issues directly in their integrated report, they refer to the additional sustainable development report that is based on the GRI framework. Sasol also submits an annual GRI report.

Sacoil holdings only reports on one sector-specific indicator that refers to sites that have been decommissioned or are in the process of being decommissioned. Sacoil reports on all decommissioning costs caused by exploration, evaluation, development or ongoing production evaluated by experts in the field (Sacoil, 2012). Oando, an indigenous Nigerian oil company, focuses on social issues such as operations where indigenous

communities are present, together with their sustainable community development programme (Oando, 2012). Oando also reports on safety, one of the most important performance indicators in the *oil and gas industry*. It is incorporated into the *oil and gas sector supplement indicator* under social performance measurements, OG13. It refers to the prevention of process safety events such as spills, fires and gas releases and includes reporting on the maintenance programme of the company.

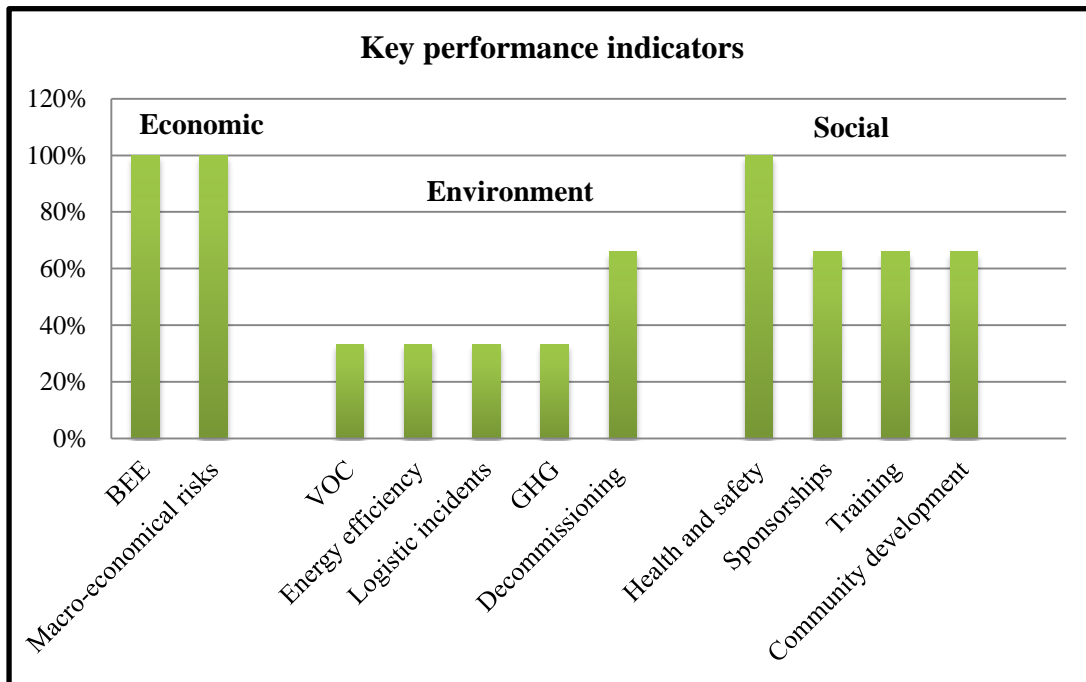
The next step was to identify the key performance indicators as published in the companies' integrated reports.

4.5.1 Key performance indicators (KPIs)

KPIs, as illustrated in Figure 4.4, were identified for each company as reported on in their integrated reports for 2012, as this report showed improvement from 2011. Sasol identified their key performance indicators in their integrated report, while Oando and Sacoil's indicators were identified based on the information provided in their integrated reports. All three companies include sustainability measurements in their integrated report, whether they provide in-depth analyses regarding their corporate social responsibility or quantifying the performance measurements based on the GRI framework.

Based on the objectives of this study, only sustainability indicators were identified, as financial indicators are being addressed in the companies' annual financial report based on the International Financial Reporting Standards (IFRS).

Figure 4.4. Key performance indicators for the oil and gas industry



The above results indicate that oil and gas companies report on all three aspects of sustainability, however the focus remains on economic and social indicators. Economic performance indicators refer to the compliance to the Broad-Based Black Economic Empowerment Act (BBBEE), which aims to realise South Africa’s full economic potential by focusing on historically disadvantaged people, black people, women, youth, the disabled and rural communities in particular (Southafrica.info, 2013). Economic performance also refers to macro-economic risk, which includes crude oil prices and foreign exchange rate risks. Both these KPIs achieved a 100% reporting score.

The companies reported on environmental aspects, but only Sasol identified the majority as key performance indicators. Volatile organic compounds (VOC) refer to investments in projects to reduce the release of VOC emissions into the atmosphere, which include benzene, toluene, xylene, ethylbenzene, 1,3-butadiene and acetaldehyde. Sasol also focuses on minimising the safety risk and environmental impact regarding the transportation of products by means of pipelines, railroad and finally road transportation (Sasol, 2012).

Both Oando and Sacoil reported on decommissioning and the rehabilitation of operation sites. Sacoil also implemented water and air quality programmes, but this was not

identified as a key performance measurement, as minimal information was provided regarding these programmes (Sacoil, 2012).

Health and safety were identified as one of the major key performance indicators in the social category. All three companies reported on safety activities and their compliance to health and safety legislations. Sasol evaluates their safety performance based on the recordable case rate, which includes injuries and illnesses among employees, hired labour and service providers (Sasol, 2012). Sasol also reported on investments and training, but it was not identified as one of the non-financial key performance measurements (Sasol, 2012). Oando and Sacoil measured their social performance based on empowerment of their employees, number of sponsorships and donations and community development programmes that form part of their corporate social responsibility (Sacoil, 2012, Oando, 2012). Sacoil also focused on their implementation of a social and ethics committee, which is responsible for the monitoring of activities regarding legislation and ‘best practice’.

4.5.2 Development of the SBSC

The final step in this study was to develop a sustainable balance scorecard for the oil and gas industry. The environmental and social exposure of *oil and gas* companies, Table 4.2 and Table 4.3, is based on the above results as well as important sustainability topics as identified by stakeholders (GRI, 2013b).

Table 4.2. Environmental exposure of *oil and gas* companies

ENVIRONMENTAL EXPOSURE	
Performance Indicator	Performance Measurement
Energy Efficiency	Total amount invested in and generated by renewable energy Energy consumption and reduction Information regarding research and development of renewable energy technology
Logistic incidents	Number of product transported by means of pipelines, railway and road.
GHG emissions	Total amount of GHG emissions Strategies to reduce emissions caused by production, refining and product end use
Decommissioning	Decommissioning / Rehabilitation costs Number of sites that have been decommissioned and in the process of being decommissioned
Biodiversity impact management	Number of operation sites that have an impact on biodiversity Strategies to prevent/decrease BES
Water management	Water consumption Number of waste water treatment plants
Pollution	Amount of drilling waste Number of leagages and oil spills Strategies to prevent pollution and oil/gas spills
Fuel quality	Benzene, lead and sulphur content in fuels Volume of bio fuels produced and purchased that meets sustainability criteria

Table 4.3. Social exposure of *oil and gas* companies

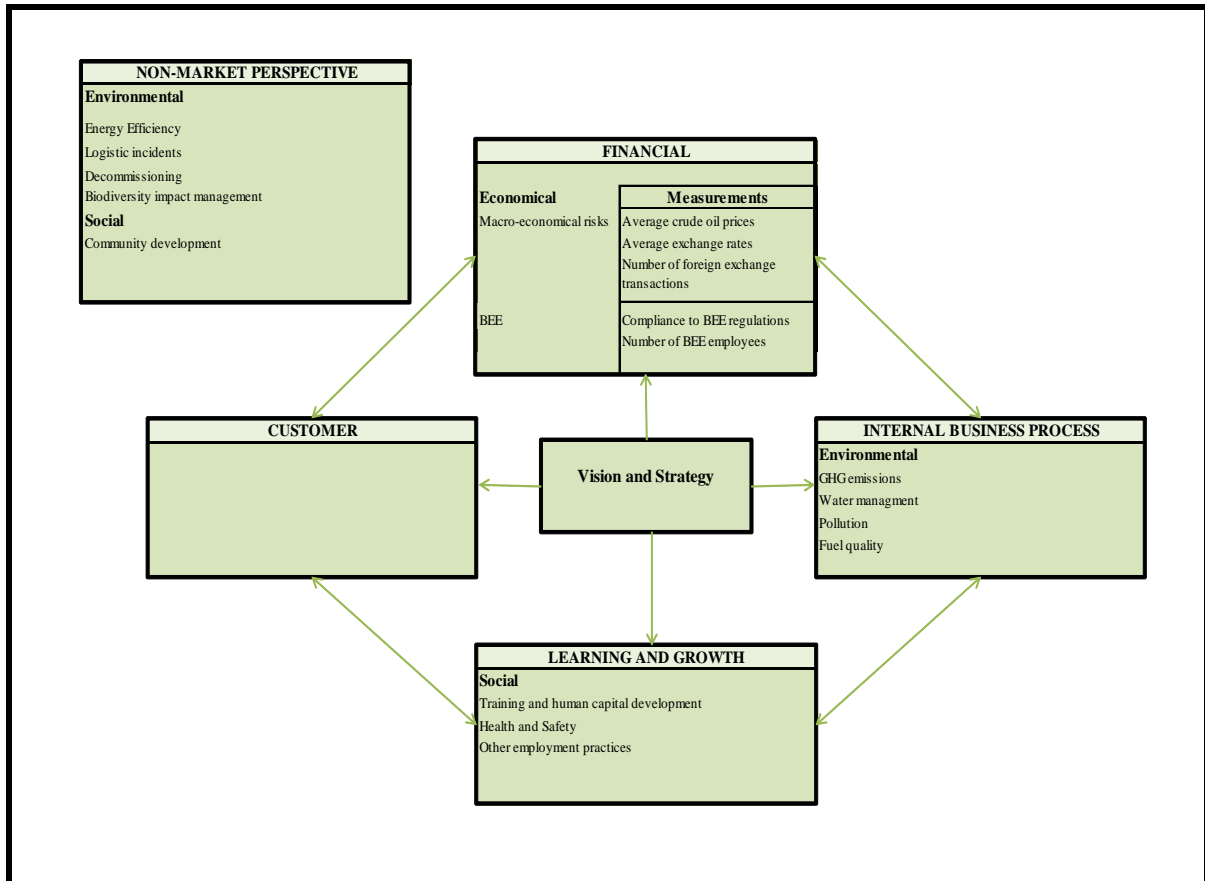
SOCIAL EXPOSURE	
Performance indicator	Performance measurement
Health and Safety	Number of accidents Activities to inform employees regarding health and safety Number of process safety events Security practices in sensitive and/or conflict-affected areas
Training and human capital development	Number of promotions based on work performance Number of scholarships and academic contributions
Other employment practices	Compliance to human rights legislation Number of employees based on race and gender
Community development	Assessment and mitigation of impacts on local communities Action to compensate or reduce local community resettlement Operations where indigenous communities are present and where specific engagement strategies are in place Activities to improve the lives of the companie's host communities

These identified performance indicators together with the performance measurements can be implemented into the traditional BSC to develop an SBSC.

Managers may be keen to adapt the BSC based on the subsumption method as the *oil and gas* sector focuses on sustainable practices such as environmental, health and safety (EHS) issues and it is easy and not time consuming (Butler *et al.*, 2011). However, it was found that the market only reacted to three environmental performance indicators, namely voluntary emissions reduction, ISO 14001 certification, and corporate donations to environmental causes (Came, 2011). It is therefore useful to integrate both the subsumption and the addition non-market perspective to formulate one SBSC, dependent on the characteristic of the environmental and social issues. A number of environmental and social indicators that are included in the market system can be integrated into the existing four perspectives, while other indicators such as local community disputes are not

included in the market and therefore need be included in the additional non-market perspective (Schaltegger & Lüdeke-Freund, 2011; Figge *et al.*, 2002).

Figure 4.5. Sustainable balanced scorecard for the *oil and gas* industry



(Source: Adapted from Schaltegger & Lüdeke-Freund, 2011)

The SBSC developed in Figure 4.5 includes economic, environmental and social aspects that were identified in the separate integrated reports of the sample oil and gas companies. It was objectively included into the four BSC perspectives. All the social aspects are included in the non-market perspective as these are not included in the market system.

4.6 CONCLUDING DISCUSSION AND COMMENTS

Globally, sustainability has become increasingly important for the oil and gas sector over the past few years. The impact of climate change and the number of oil spills increase the sustainability risk and have an effect on how shareholders and investors value these companies. Furthermore, the oil and gas sector is one of the key players in the South

African economy. It is therefore important to include sustainability in the company's overall strategy and business decisions. The main research objective was to determine whether a sustainable balanced scorecard can assist petroleum companies with their integrated reporting. It was found that the selected oil and gas companies include sustainability issues in their integrated reports with a focus on social aspects. These included training, health and safety, compliance to human rights and community development in the local areas in which they operate. Furthermore, the GRI framework, together with the oil and gas sector supplement, can be used to identify performance indicators relevant to the specific company. These indicators can then be incorporated with the conventional BSC measurements to ensure balance regarding financial and economic, environmental and social issues.

4.6.1 Limitations of the study

The results of this study are limited by the focus on JSE-listed companies within the *oil and gas* industry and do not include other major *oil and gas* companies in South Africa. Furthermore, *GRI sector-specific indicators* were used to determine whether the companies integrated GRI indicators into their sustainability reporting. Therefore, the focus on the *oil and gas* industry limits the application of the SBSC to companies in other industries. The key performance indicators were also objectively identified based on important factors discussed in the integrated reports.

In addition to the above, this study focused on including sustainability, which consists of economic, environmental and social issues, into the BSC. No attention is paid to the conventional BSC perspectives. This, being outside the scope of the research, limits the application of the results.

4.6.2 Areas for future research

Considering the above limitations, and the increasing importance of sustainability reporting, further research can be conducted with regard to the global *oil and gas* industry. The research can also be expanded to include indicators from the general GRI framework and performance indicators in the four BSC perspectives.

4.7 REFERENCES

Anon. 2011. Why sustainability and equity? (*In* Human development report. 2011. Sustainability and equity: A better future for all. pp. 13-21).

Babber, G. 2012/2013. Integrated reporting and sustainability go hand in hand. *Financial Management*, Dec 2012/Jan 2013:3.

Butler, J.B., Henderson, S.C. & Raiborn, C. 2011. Sustainability and the balanced scorecard: Integrating green measures into business reporting. *Management Accounting Quarterly Winter*, 12(2):201.

Came, F. 2011. Do markets really respond to corporate sustainability efforts? <http://www.greenbiz.com/news/2011/03/24/do-markets-really-respond-corporate-sustainability-efforts?page=0%2C0>. Date of access: 28 Sept 2013.

Caraiani, C., Lungu, C.L., Dascalu, C., Cimpoeru, M.V. & Dinu, M. 2012. Social and environmental performance indicators: Dimensions of integrated reporting and benefits for responsible management and sustainability. *African Journal of Business Management*, 6(14):4990-4997.

Dow Jones Sustainability Indices. 2013. Dow Jones sustainability indices in collaboration with RobecoSAM. <http://www.sustainability-indices.com/index.jsp>. Date of access: 15 Jul 2013.

DJSI *see* Dow Jones Sustainability Indices.

Eccles, R.G. & Krzus, M. 2010. One report: Integrated reporting for a sustainable strategy. John Willey and Sons, Inc: New York.

Figge, F., Hahn, T., Schaltegger, S. & Wagner, M. 2002. The sustainability balanced scorecard linking sustainability management to business strategy. *Business Strategy and the Environment*, 11(2002):269-284.

Furber, M. 2013. A word from the president: "Integrated reporting requires a considerable shift in attitude". *Financial Management*, Oct:2.

Gibbons, C., Barman, T. & Lees, G. 2010. Sustainability in emerging markets: Lessons from South Africa. <http://www.cimaglobal.com/Thought-leadership/Research-topics/Sustainability/Sustainability-in-emerging-markets-lessons-from-South-Africa/>.

Date of access: 26 Apr 2012.

Global Reporting Initiative. 2013a. Sustainability Reporting Guidelines & Oil and Gas Sector Supplement. 64p.

Global Reporting Initiative. 2013b. Sustainability topics for sectors: What do stakeholders want to know? pp.21-26.

GRI *see* Global Reporting Initiative.

Groot, T.L.C.M. & Selto, F. 2013. Integrated financial and non-financial measures. (*In* Advanced management accounting, Pearson Education. London: New York. pp. 1-34).

Hansen, E.G. & Schaltegger, S. 2012. Pursuing sustainability with the balanced scorecard: Between shareholder value and multiple goal optimisation. Centre for Sustainability Management. Lüneburg.

Holmes, L. 2012. Risky business. *Financial Management*, October:27-30.

Holmes, L. 2013. A bright idea. *Financial Management*, March:32-33.

IIRC *see* International Integrated Reporting Council

International Integrated Reporting Council. 2012. <http://www.theiirc.org/>. Date of access: 14 July 2013

International Petroleum Industry Environmental Conservation Association. 2013. United Nations Conference on Sustainable Development. <http://rio20.ipieca.org/our-role>. Date of access: 3 Apr.2013.

IPIECA *see* International Petroleum Industry Environmental Conservation Association

Jones, P. 2011. Designing an effective environmental balanced scorecard. http://www.excitant.co.uk/wpcontent/uploads/2012/07/Excitant_WP_Designing_Environmental_Balanced_Scorecard.pdf. Date of access: 4 July 2013.

Kiewa Consulting (Pty) Limited. 2011. Integrating sustainability into business practices: A Case Study Approach. <http://www.charteredaccountants.com.au/~//media/Files/Industry%20topics/Reporting/2011/Sustainability%205%20Case%20Studies%20paper.ashx>. Date of access: 29 Feb 2012.

King, M. 2013. Global Conference on Sustainability and Reporting 2013. Amsterdam. May 2013.

Oando. 2012. Annual Report & Accountant. 176p.

Pinto, A. 2012. Why is South Africa a BRIC? <http://www.gatewayhouse.in/publication/gateway-house/features/why-south-africa-bric>. Date of access: 17 Apr 2013.

Rohm, H. & Montgomery, D. 2011. Link sustainability to corporate strategy using the balanced scorecard. <http://www.balancedscorecard.org/Portals/0/PDF/LinkingSustainabilitytoCorporateStrategyUsingtheBalancedScorecard.pdf>. Date of access: 11 July 2013.

Sacoil Holdings Limited. 2011. Annual Report February 2011. 76p.

SAPIA *see* South African Petroleum Industry Association

Sasol. 2013. http://www.sasol.com/sasol_internet/frontend/navigation.jsp?navid=1&rootid=1&pnav=sasol&cnav=sasol. Date of access: 4 July 2013.

Schaltegger, S. & Lüdeke-Freund, F. 2011. The sustainability balanced scorecard: Concept and the case of Hamburg Airport. Lüneburg. Germany

Smith, R. 2013. Trialogue Sustainability Review: The quarterly review of Sustainability in South African business. *Financial Management*:13.

SouthAfrica.info. 2012. Doing business with SA. http://www.southafrica.info/business/economy/infrastructure/energy.htm#.UTNm_xxTCS0. Date of access: 8 March 2013

SouthAfrica.info. 2013. Black economic empowerment. <http://www.southafrica.info/business/trends/empowerment/bee.htm#.UnlL0fky2Sp>. Date of access: 5 Nov 2013.

South African Petroleum Industry Association. 2013. <http://www.sapia.co.za/industry-overview/fuel-industry.html>. Date of access: 8 March 2013.

Tilley, C. 2012. Corporate reporting needs new approach. *Financial Management*, Nov:65.

Van Zyl, A.S. 2013. Sustainability And Integrated Reporting In The South African Corporate Sector. *International Business and Economics Research Journal*, 12(8):903-926.

Verifysustainability. 2013. Sustainability: The solution matrix. http://www.verifysustainability.com/Pie%20Diagram/PieDiagram_Open_Page.aspx. Date of access: 7 Nov 2013.

Wandrag, S. 2013. GRI Conference [e-mail]. 17 July 2013.

CHAPTER 5

5.1 BACKGROUND

The purpose of this chapter is to summarise and conclude the study by providing recommendations based on the findings presented in Chapter 4. The main objective of this study was to determine whether a sustainable balanced scorecard could assist oil and gas companies with their integrated reporting.

The research indicated that investors and stakeholders are adapting to the changing business environment as sustainability reporting becomes more important for value creation and long-term growth, especially for companies in the oil and gas sector. These companies face continuous challenges regarding environmental and social issues, resource limitations and changes in customer demand. It is therefore crucial to develop and implement adequate sustainability performance measurements.

In order to report on sustainability, it is important to understand the meaning of this term. Sustainability reporting focuses on economic, social and environmental issues and can also be referred to as: Sustainability reporting, non-financial reporting, corporate social reporting and the triple bottom line. The triple bottom line theory refers to the interaction between the financial success of the company as well as environmental quality and social justice. The use of the triple bottom line is limited regarding the competitive strategy of the organisation and the link between sustainability and overall business success (Rohm & Montgomery, 2011). It is therefore vital for companies to develop a framework to link sustainability with the overall business strategy and to effectively incorporate sustainability in the integrated reporting process. This can be addressed by implementing a strategy-based balanced scorecard aligned with the triple bottom line principles. This will provide managers with a tool that incorporates both social and environmental goals as well as financial performance and competitive advantage (Rohm & Montgomery, 2011). Considering the above, the main objective of this study, as defined in Chapter 1 (refer to section 1.5 on page 5), was to determine whether a sustainable balanced scorecard can assist companies in the oil and gas sector with their integrated reporting.

5.2 RESEARCH SUMMARY

5.2.1 Literature research synopsis

In Chapter 1 the background to the study was established referring to the fast developing concept of sustainability, the increasing demand for information beyond financial success and the reporting process of how managers create value for both their shareholders and customers through integrated reporting. This chapter also included an introduction to the oil and gas sector and the challenges they face as a multifaceted, global industry. One of the greatest challenges for the petroleum industry is to continually find and provide products that are both environmentally and socially responsible, while simultaneously contributing to global economic and social development (IPIECA, 2013).

The research problem and objectives were then formulated based on the research mentioned above (refer to section 1.4 and 1.5 on pages 4 and 5).

In Chapter 2, an overview of the research methodology was provided as well as the methods used in this study.

Chapter 3 provides an overview of the applicable literature that was used in this study, namely integrated reporting, the GRI sustainability reporting framework and the balanced scorecard. The GRI framework addresses the three sustainability dimensions, namely the economic, social and environment indicators. The social dimension is then further categorised into human rights, labour practices and decent work, society and product responsibility. A sector-specific supplement, also compiled by the GRI, was used in this study as a measurement to analyse the integrated reports of the sample JSE-listed oil and gas companies.

5.2.2 Empirical research synopsis

The third chapter is represented in the form of research article. The empirical study was based on JSE-listed companies in the integrated oil and gas sector, namely Oando plc, Sacoil Holdings and Sasol Ltd. This chapter contains the results of the empirical analysis of performance indicators used in the integrated reports of the sampled companies. The article summarises the literature principles as set out in Chapters 2 and 3. It also includes

the results of the research undertaken to address the research objectives stated in Chapter 1 (refer to section 3 on page 5).

The starting point was to determine whether the GRI *Sector Supplement* indicators were used during the reporting process. The JSE oil and gas industry companies' integrated reports were therefore analysed to establish this.

Secondly, key performance indicators were identified for each company as reported on in their integrated reports for 2012 as the latter was used because it displayed improvements from the 2011 integrated reports. All three companies include sustainability measurements in their integrated report, but the results indicate that economic and social indicators are more important for the shareholders.

Lastly, an SBSC was developed and presented for the *oil and gas* sector. This was done based on the performance measurements identified in the integrated reports as well as GRI sector performance indicators.

5.2.3 Discussion

A concerning observation made during the study is that oil and gas companies still place more emphasis in their reporting on social and economic performance despite the increasing importance of environmental performance especially in this 'contaminated' industry. This raises questions regarding the effective implementation of sustainability in the integrated reports. The cause of this might be the lack of an effective sustainable reporting framework and the multiple possibilities to define sustainability.

One can conclude that sustainability centres on the economic, environmental and social responsibility of a company. It is therefore recommended that the GRI framework and BSC be utilised as a performance measurement tool to link sustainability objectives to the overall business strategy. The IIRC signed an agreement with the GRI to deepen their co-operation in sustainability reporting. The first version of the newly developed integrated reporting framework will be published in December 2013 (Furber, 2013). This will be the next step in further ensuring that sustainability is successfully incorporated into the integrated reports. As it is mandatory for all JSE-listed companies to include an integrated

report with their annual financial reports, this will also apply to the companies in the oil and gas industry.

Furthermore, it is recommended that the companies in the oil and gas industry utilise the developed SBSC, together with the use of GRI performance indicators to improve the measurement and reporting of sustainability issues. Considering all of the above, this study will contribute to the current knowledge on sustainability measurement and reporting.

5.3 LIMITATIONS OF THE STUDY

The results of this study are limited by the sample focusing on JSE-listed companies within the *oil and gas* industry as these do not include other major *oil and gas* companies in South Africa. It is also limited as the GRI *Sector-specific Indicators* were used to determine whether the company's integrated GRI indicators into their sustainability reporting. Therefore, the focus on the *oil and gas* industry limits the application of the SBSC to companies in other industries. The key performance indicators were also objectively identified based on important factors discussed in the integrated reports.

Secondly, the study places a limitation on similar research performed in other countries based on availability of integrated and sustainability reports as integrated reporting would not necessarily be a listing requirement in other countries.

Thirdly, the performance indicators were objectively included in the BSC perspectives as it is difficult to determine which environmental and social issues are included in the market strategy and which should be included in the non-market perspective.

In addition to the above, this study focused on including sustainability, which consists of economic, environmental and social issues, into the BSC. No attention is given to the conventional BSC perspectives. This being outside the scope of the research, limits the application of the results.

5.4 RECOMMENDATIONS FOR FUTHER RESEARCH

More organisations measure their performance beyond financial perspectives, which include aspects such as safety, environmental impact and employee satisfaction. Therefore, new or renewed strategies are needed to link the organisation's sustainability performance with its financial performance. The framework should incorporate environmental and social activities in the company's strategy as well as reporting processes (Caraiani *et al.*, 2012). Further research can therefore be conducted by applying this study to different JSE sectors. It can also include comparisons between JSE-listed oil and gas companies and other major industry leaders that are listed on different stock exchanges. The same study can also be conducted based on the new integrated reporting framework that will be published in December 2013.

5.5 REFERENCES

Anon. 2011. Why sustainability and equity? (*In Human development report. 2011. Sustainability and equity: A better future for all. pp. 13-21*).

Babber, G. 2012/2013. Integrated reporting and sustainability go hand in hand. *Financial Management*, Dec 2012/Jan 2013:3.

Barrows, C.W. 2012. Introduction to management in the hospitality industry. 10th ed. New Jersey: Wiley.

Butler, J.B., Henderson, S.C. & Raiborn, C. 2011. Sustainability and the balanced scorecard: Integrating green measured into business reporting. *Management Accounting Quarterly*, 12(2), Winter.

Bryman, A. & Bell, E. 2007. Business research methods. 2nd ed. New York: Oxford. 786p.

Caraiani, C., Lungu, C.L., Dascalu, C., Cimpoeru, M.V. & Dinu, M. 2012. Social and environmental performance indicators: Dimensions of integrated reporting and benefits for responsible management and sustainability. *African Journal of Business Management*, 6(14):4990-4997.

Carbon Disclosure Project. 2013. CDP, CDSB and IIRC announce collaboration to accelerate integrated reporting. <https://www.cdproject.net/en-US/News/CDP%20News%20Article%20Pages/CDP-CDSB-and-IIRC-announce-collaboration-to-accelerate-integrated-reporting.aspx>. Date of access: 7 Sept 2013.

CDP *see* Carbon Disclosure Project.

Chang, D., Kuo, L.R. & Chen, Y. 2011. Industrial changes in corporate sustainability performance: An empirical overview using data envelopment analysis. *Journal of Cleaner Production*, 2011:1-9.

Chartered Institute of Management Accountants. 2011. Enterprise performance management. (*In Strategic Paper E3 Enterprise Strategy. UK: BPP. pp.513-554*).

Chartered Institute of Management Accountants. 2012a. Oil and gas sector taps into sustainability. *Financial Management*: 9.

Chartered Institute of Management Accountants. 2012b. The balanced scorecard: 20 years young. *Insight*, Oct 2012.

Chartered Institute of Management Accountants. 2013. Climate-related risks move up the boardroom agenda. *Financial Management*, Nov:9.

CIMA *see* Chartered Institute of Management Accountants.

Coldwell, D. & Herbst, F. 2004. Business Research. Cape Town, South Africa: Juta.

Cooper, D.R. & Schindler, P.S. 2008. Business Research Methods. 10th ed. New York: McGraw Hill.

Crawford, D. & Scaletta, T. 2005. The Balanced Scorecard and Corporate Social Responsibility: Aligning Values for Profit. *FMI Journal*, 17(3):39-42.

De Vaus, D.A. 2001. Research design in social research. London: Sage.

Du Plooy, G.M. 2001. Communication research: Techniques, methods and applications. South Africa: Juta. 384p.

Dow Jones Sustainability Indices. 2013. Dow Jones sustainability indices in collaboration with RobecoSAM. <http://www.sustainability-indices.com/index.jsp>. Date of access: 15 Jul 2013.

DJSI *see* Dow Jones Sustainability Indices

Eccles, R.G. & Krzus, M. 2010. One report: Integrated reporting for a sustainable strategy. New York: John Wiley and Sons, Inc.

Figge, F., Hahn, T., Schaltegger, S. & Wagner, M. 2002. The sustainability balanced scorecard linking sustainability management to business strategy. *Business Strategy and the Environment*, 11(2002):269-284.

- Furber, M. 2013. A word from the president: “Integrated reporting requires a considerable shift in attitude”. *Financial Management*, Oct:2.
- Garcia, C. 2013. Disclosure on management approach: G4. GRI Conference: Amsterdam
- Gates, S. & Germain, C. 2010. Integrating sustainability measures into strategic performance measurement systems: An empirical study. *Management Accounting Quarterly*, 11(3):1-7.
- Gibbons, C., Barman, T. & Lees, G. 2010. Sustainability in emerging markets: Lessons from South Africa. <http://www.cimaglobal.com/Thought-leadership/Research-topics/Sustainability/Sustainability-in-emerging-markets-lessons-from-South-Africa/>.
Date of access: 26 Apr 2012.
- Global Reporting Initiative. 2013a. <https://www.globalreporting.org/Pages/default.aspx>.
Date of access: 10 Aug 2013.
- Global Reporting Initiative. 2013b. Sustainability Reporting Guidelines & Oil and Gas Sector Supplement. 64p.
- Global Reporting Initiative. 2013c. Indicator Protocols Set Economic (EC) Oil and Gas Sector Supplement. 17p.
- Global Reporting Initiative. 2013d. Indicator Protocols Set Labor Practices and Decent Work (LA) Oil and Gas Sector Supplement. 21p.
- Global Reporting Initiative. 2013e. Indicator Protocols Set Human Rights (HR) Oil and Gas Sector Supplement. 15p.
- Global Reporting Initiative. 2013f. Indicator Protocols Set Society (SO) Oil and Gas Sector Supplement. 20p.
- Global Reporting Initiative. 2013g. Indicator Protocols Set Product Responsibility (PR) Oil and Gas Sector Supplement. 12p.
- Global Reporting Initiative. 2013h. Indicator Protocols Set Environment (EN) Oil and Gas Sector Supplement. 48p.

GRI *see* Global Reporting Initiative.

Groot, T.L.C.M. & Selto, F. 2013. Integrated financial and non-financial measures. (*In* Advanced management accounting, Pearson Education. London: New York. p. 1-34).

Hansen, E.G. & Schaltegger, S. 2012. Pursuing sustainability with the balanced scorecard: Between shareholder value and multiple goal optimisation. Centre for Sustainability Management. Lüneburg

Harland, N. 2013. Record, control, report. *BusinessBrief*, 18(1):39-40.

Hattersley, L. 2012. Powering the future. *BusinessBrief*, 17(3):23-28.

Holmes L. 2012a. Sustaining vision. *Financial Management*, September:26-30

Holmes, L. 2012b. Risky business. *Financial Management*, October:27-30.

Holmes, L. 2013. A bright idea. *Financial Management*:32-33, Mar.

IIRC. 2012. <http://www.theiirc.org/>. Date of access: 14 July 2013

International Petroleum Industry Environmental Conservation Association. 2013. United Nations Conference on Sustainable Development. <http://rio20.ipieca.org/our-role>. Date of access: 3 Apr.2013.

IPIECA *see* International Petroleum Industry Environmental Conservation Association

Jones, P. 2011. Designing an effective environmental balanced scorecard.

http://www.excitant.co.uk/wpcontent/uploads/2012/07/Excitant_WP_Designing_Environmental_Balanced_Scorecard.pdf. Date of access: 4 July 2013.

Jung, E.J., Kim, J.S. & Rhee, S.K. 2001. The measurement of corporate environmental performance and its application to the analysis of efficiency in oil industry. *Journal of Cleaner Production*, 9(2001):551-563.

Kallet, R.H. 2004. How to write the methods section of a research paper. *Respiratory Care*, 49(10):1229-1232.

Kaplan, R.S. 2010. Conceptual foundation of the balanced scorecard. Harvard Business School (Working Paper).

Kiewa Consulting Pty. Limited. 2011. Integrating sustainability into business practices: A Case Study Approach.

<http://www.charteredaccountants.com.au/~//media/Files/Industry%20topics/Reporting/2011/Sustainability%205%20Case%20Studies%20paper.ashx>. Date of access: 29 Feb 2012.

Krishnaswamy, K.N., Sivakumar, A.L. & Mathirajan, M. 2006. Management research methodology: Integration of principles, methods and techniques. India, New Delhi: Pearson Education.

Kumar, R. 2005. Research methodology: A step-by-step guide for beginners. 2nd ed. London: Sage.

Kumar, C.R. 2008. Research methodology. India, New Delhi: APH Publishing Corporation.

Leuner, J. 2012. Integrated reporting takes hold. *Communication World*: 33-35

Ligteringen, E. 2013. Visioning a sustainable global economy: Information, integration, innovation. Global Conference on Sustainability and reporting: Amsterdam.

Mayer, N. 2013. Top performing sectors of the JSE.

http://www.sharenet.co.za/marketviews/mv_view_article.php?id=1877. Date of access: 10 Apr 2013.

Musikanski, L. 2012. How to account for sustainability: A business guide to measuring and managing. UK: Dō Sustainability

Petrobras. 2013. Regional and global challenges in reporting: New scenarios in the oil and gas industry. GRI Conference: Amsterdam.

Pinto, A. 2012. Why is South Africa a BRIC?

<http://www.gatewayhouse.in/publication/gateway-house/features/why-south-africa-bric>. Date of access: 17 Apr 2013.

Plaizier, W., Pearce, J., Richard, D., Alberich, J., Wilczynski, H. & Sprott, M. 2013. Southern Africa's oil and gas opportunity. http://www.atkearney.co.za/oil-gas/ideas-insights/article/-/asset_publisher/LCcgOeS4t85g/content/southern-africas-oil-and-gas-opportunity/10192. Date of access: 10 Apr 2013.

Ramalho, A. 2010. King III commands integrated reporting in South Africa. *Business and Environment*, 5-6.

Rohm, H. & Montgomery, D. 2011. Link sustainability to corporate strategy using the balanced scorecard
<http://www.balancedscorecard.org/Portals/0/PDF/LinkingSustainabilitytoCorporateStrategyUsingtheBalancedScorecard.pdf> . Date of access: 11 Julie 2013.

SAICA *see* South African Institute of Chartered Accountants

SAPIA *see* South African Petroleum Industry Association

Sasol. 2013.

http://www.sasol.com/sasol_internet/frontend/navigation.jsp?navid=1&rootid=1&pnav=sasol&cnav=sasol.

Serwiniwski, M.A. & Marshall, J. 2010. The ROI of social responsibility: Driving sustainability in the oil and gas sector. *SPE International Conference on Health, Safety and Environment in Oil and Gas Exploration and Production* (Abstract).
<http://www.onepetro.org/mslib/servlet/onepetropreview?id=SPE-127193-MS>. Date of access: 15 Apr 2013.

South African Institute of Chartered Accountants. 2012. Sustainability reporting and integrated reporting.
<https://www.saica.co.za/TechnicalInformation/SustainabilityandIntegratedReporting/SustainabilityReportingandIntegratedReporting/tabid/1653/language/en-ZA/Default.aspx>.
Date of access: 4 August 2012

South African Petroleum Industry Association. 2013. <http://www.sapia.co.za/industry-overview/fuel-industry.html>. Date of access: 8 March 2013.

SouthAfrica.info. 2012. Doing business with SA.

http://www.southafrica.info/business/economy/infrastructure/energy.htm#.UTnm_xxTCS

Date of access: 8 March 2013.

The global oil and gas industry association for environmental and social issues, The American Petroleum Institute (API), International Association of Oil & Gas Producers (OGP). 2010. Oil and gas industry guidance on voluntary sustainability reporting. 2nd ed. 156p.

Tilley, C. 2011. Integrated reporting must complement a company's strategic goals. *Financial Management*: 65, May.

Tilley, C. 2012. Corporate reporting needs new approach. *Financial Management*: 65, Nov.

Tilley, C. 2013. Companies need to understand and manage risk. *Financial Management*: 65, Feb.

Trencome. 2013. Petroleum industry. <http://www.trencome.com/petroleumindustry.htm>.
Date of access: 8 March 2013.

Van Zyl, A.S. 2013. Sustainability And Integrated Reporting In The South African Corporate Sector. *International Business and Economics Research Journal*, 12(8):903-926.

Verschoor, C. 2011. Should sustainability reporting be integrated? *Management Accounting Quarterly*: 13-15, Dec.

Wadee, N. 2011. Straight shooting – integrated reporting – an opportunity to reshape business.

<http://www.accountancysa.org.za/resources/ShowItemArticle.asp?Article=Straight+Shooting++Integrated+Reporting+%96+an+opportunity+to+reshape+business&ArticleId=2138&Issue=1101> Date of access: 4 Augustus 2012

Wandrag, S. 2013. GRI Conference [e-mail]. 17 July.

Weaver, D.B. 2012. Clearing the path to sustainable mass tourism: A response to Peeters. *Tourism Management*, 33(2012):1042-1043.

Welman, J.C. & Kruger, S.J. 2002. Research methodology for the business and administrative sciences. 2nd ed. Southern Africa, Cape Town: Oxford University Press.

5.6 ANNEXURE A: GRI PERFORMANCE INDICATORS

Legend:

EC = Economical performance indicators

EN = Environmental performance indicators

LA = Labour practices and decent work performance indicators

HR = Human rights performance indicators

SO = Society performance indicators

PR = Product responsibility performance indicators

OG = Oil and gas sector performance indicator

ECONOMIC

Indicator code	Economic description
	Economic performance
EC1	Direct economic value generated and distributed
EC2	Financial implications, risks and opportunities due to climate change
EC3	Coverage of the organisation's defined benefit plan obligations
EC4	Significant financial assistance received from government
	Market presence
EC5	Ratios of standard entry level wage, by gender, compared to local minimum wage
EC6	Policy, practices and proportion of local-based spending
EC7	Procedures for local hiring and proportion of senior management hired from the local community

	Indirect economic impact
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit
EC9	Understanding and describing significant indirect economic impacts
OG1	Volume and type of estimated proved reserves and production

ENVIRONMENT

Indicator code	Environmental description
	Materials
EN1	Materials used by weight or volume
EN2	Percentage of materials used that are recycled input materials
	Energy
EN3	Direct energy consumption by primary energy source
OG2	Total amount invested in renewable energy
OG3	Total amount of renewable energy generated by source
EN4	Indirect energy consumption by primary source
EN5	Energy saved due to conservation and efficiency improvements
EN6	Initiatives to provide energy-efficient or renewable energy-based products and services, and reduction in energy requirements as a result of these initiatives
EN7	Initiatives to reduce indirect energy consumption
	Water
EN8	Total water withdrawal by source
EN9	Water sources significantly affected by withdrawal of water
EN10	Percentage and total volume of water recycled and reused
	Biodiversity

EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas
EN13	Habitats protected or restored
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity
OG4	Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations
	Emissions, effluents and waste
EN16	Total direct and indirect greenhouse gas emissions by weight
EN17	Other relevant indirect greenhouse gas emissions by weight
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved
EN19	Emissions of ozone-depleting substances by weight
EN20	NO _x , SO _x and other significant air emissions by type and weight
EN21	Total water discharge by quality and destination
OG5	Volume of formation or produced water
EN22	Total weight of waste by type and disposal method
EN23	Total number and volume of significant spills
OG6	Volume of flared and vented hydrocarbon
OG7	Amount of drilling waste and strategies for treatment and disposal
EN24	Weight of transported, imported, exported or treated waste deemed hazardous and percentage of transported waste shipped internationally
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by reporting organisation's discharges of water and runoff
	Products and services
EN26	Initiatives to mitigate environmental impacts of products and services, and

	extent of impacts mitigation
OG8	Benzene, lead and sulphur content in fuels
EN27	Percentage of products sold and their packaging materials that are reclaimed by category
	Compliance
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations
	Transport
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organisation's operations
	Overall
EN30	Total environmental protection expenditure and investments by type

SOCIAL

Indicator code	Social description
	Employment
LA1	Total workforce by employment type, employment contract and region, broken down by gender
LA2	Total number and rate of new employee hires and employee turnover by age group, gender and region
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees
	Labour/management relations
LA4	Percentage of employees covered by collective bargaining agreement

LA5	Minimum notice period regarding operational changes
	Occupational health and safety
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programmes
LA7	Rates of injury, occupational diseases, lost days, absenteeism and total number of work-related fatalities, by region and gender
LA8	Education, training, counselling, prevention and risk-control programmes in place to assist workforce members, their families and community members regarding serious diseases
LA9	Health and safety topics covered in formal agreements with trade unions
	Training and education
LA10	Average hours of training per year per employee by gender and employee category
LA11	Programmes for skills managements and lifelong learning that support the continues employability of employees and assist them in managing career endings
LA12	Percentage of employees receiving regular performance and career development reviews, by gender
	Diversity and equal opportunity
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age, group, minority group membership and other indicators of diversity
	Equal remuneration for women and men
LA14	Ratio of basis salary and remuneration of women to men by employee category
LA15	Return to work and retention rates after parental leave, by gender.

Indicator code	Social description
	Investment and procurement practices
HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening
HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening and actions taken
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employee trained
	Non-discrimination
HR4	Total number of incidents of discrimination and corrective actions taken
	Freedom of association and collective bargaining
HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions take to support these rights
	Child labour
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labour, and measures taken to contribute to the effective abolition of child labour
	Forced and compulsory labour
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of all forms of labour
	Security practices

HR8	Percentage of security personnel trained in the organisation's policies or procedures concerning aspects of human rights that are relevant to operations
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken
OG9	Operations where indigenous communities are present or affected by activities and where specific engagement strategies are in place
	Assessment
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments
	Remediation
HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms

Indicator Code	Social description
	Local communities
SO1	Percentage of operations with implemented local community engagement, impact assessments and development programmes
S09	Operations with significant potential or actual negative impacts on local communities
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities
OG10	Number and description of significant disputes with local communities and indigenous people
OG11	Number of sites that have been decommissioned and sites that are in the process of being decommissioned

Corruption	
SO2	Percentage and total number of business units analysed for risks related to corruption
SO3	Percentage of employees trained in organisation's anti-corruption policies and procedures
SO4	Actions taken in response to incidents of corruption
Public policy	
SO5	Public policy positions and participation in public policy development and lobbying
SO6	Total value of financial and in-kind contributions to political parties, politicians and related institutional by country
Anti-competitive behaviour	
SO7	Total number of legal actions for anti-competitive behaviour, anti-trust and monopoly practices and their outcomes
Compliance	
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations
Involuntary resettlement	
OG12	Operations where involuntary resettlement took place, the number of households resettled in each and how their livelihoods were affected in the process
Asset integrity and process safety	
OG13	Number of process safety events by business activity

Indicator	Social description
------------------	---------------------------

code	
	Customer health and safety
PR1	Lifecycle stages in which health and safety impacts of products and service are assessed for improvement, and percentage of significant products and services categories subject to such procedures
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their lifecycle, by type of outcomes
	Product and service labelling
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction
	Marketing communications
PR6	Programmes for adherence to laws, standards and voluntary codes related to marketing communications, including advertising, promotions and sponsorship
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and scholarship by type of outcomes
	Customer privacy
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data
	Compliance

PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of product and services
	Fossil fuel substitutes
OG14	Volume of biofuels produced and purchase meeting sustainability criteria