

Trends in sustainability disclosures in the integrated reports of South African listed companies

by

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Contents

Contents	3
I Abstract.....	6
II Commonly Used Terms and abbreviations	8
III List of figures.....	9
IV List of tables.....	10
Chapter 1 Introduction	11
Chapter 2 Literature Review	13
2.1 Corporate Sustainability	13
2.1.1 The development of the concept of sustainability and sustainable development	14
2.1.2 Organisational application of the sustainability concept.....	16
2.1.3 A stakeholder approach to sustainability.....	19
2.1.4 Stakeholder accountability	23
2.1.5 Adoption of organisational sustainability practices.....	25
2.1.6 The business case for sustainability	28
2.1.7 Summary	32
2.2 Sustainability Reporting.....	33
2.2.1 Legitimacy theory.....	33
2.2.2 Reporting on sustainability	34
2.2.3 Motivation for sustainability reporting.....	37
2.2.4 Adoption of sustainability reporting	41
2.2.5 Factors limiting the adoption of sustainability reporting.....	43
2.2.6 Factors affecting the extent of sustainability reporting	44
2.2.7 Reporting of 'bad news' relating to sustainability practices	46
2.2.8 The credibility of sustainability activities and reporting.....	47
2.2.9 Summary	49
2.3 Integrated Reporting.....	50

2.3.1	Development of integrated reporting.....	50
2.3.2	The need for integrated reporting.....	52
2.3.3	Characteristics of integrated reporting	54
2.3.4	Benefits of integrated reporting	57
2.3.5	Adoption of integrated reporting.....	59
2.3.6	Summary	63
2.4	Integrated reporting and sustainability reporting.....	63
2.4.1	The relationship between integrated reporting and sustainability reporting.....	63
2.4.2	Previous Studies Examining Sustainability Disclosures in Integrated Reports	68
2.4.3	Summary	71
2.5	Conclusion.....	72
Chapter 3	Methodology	74
3.1.1	Research design	74
3.1.2	Sample selection.....	75
3.1.3	Sustainability disclosure checklist.....	76
3.1.4	Data collection	77
3.1.5	Statistical analysis of data.....	83
Chapter 4	Findings and discussion.....	86
4.1	Integration of sustainability disclosures within integrated reports	86
4.2	Sustainability Key Performance Indicators (KPIs)	91
4.3	Material sustainability disclosures	95
4.4	Balanced sustainability disclosures	98
4.5	Number of sustainability disclosures	101
4.5.1	Number of sustainability disclosures.....	102
4.5.2	Sustainability disclosure categories	105
4.5.3	Industry analysis	110
4.6	Sustainability disclosures in management commentary	115

4.7 Overall analysis of trends	121
4.7.1 Spearman's correlation test	121
4.7.2 K-means cluster analysis	125
Chapter 5 Conclusion and Recommendations	132
5.1 Summary of findings.....	132
5.2 Limitations and areas for further research	134
Appendix A	136
Appendix B	138
Appendix C	140
References	141

I Abstract

Over the last 30 years organisations have increased their sustainability disclosures in response to an increased focus on corporate sustainability, which considers the economic, environmental, and social aspects of an organisation. With the introduction of integrated reporting, organisations are encouraged to use integrated thinking to create value for their organisation in the short and long term, using all of the capitals or resources available to them. The new emphasis on reporting on maximising the organisation's human, social and relationship capital, along with its natural capital echoes the focus of sustainability reporting. However, the objectives of integrated and sustainability reporting differ in their focus, between a focus on shareholders and value creation, compared to a focus on the organisation's impact on the environment, society, and the economy.

This exploratory study examines trends in sustainability disclosure in the integrated reports of South African listed companies. It explores the trends in companies' sustainability information in their integrated reports from 2011, when integrated reporting became mandatory in South Africa, following the implementation of the King Code of Governance Principles (King III) of 2009. It covers reporting up to 2015, when the 2013 International Integrated Reporting Framework (the Framework) of the International Integrated Reporting Council was adopted in South Africa. It also takes into account the 2013 G4 Guidelines of the Global Reporting Initiative¹.

Interpretive content analysis is used, which involved creating a disclosure checklist based on the disclosure categories outlined in the G4 requirements. Issues relating to Broad-based Black Economic Empowerment ('BBBEE') which are specific to South Africa were included in the disclosure checklist. This study does not seek to measure compliance with the requirements of the GRI, or the quality of the sustainability disclosures, but rather uses the requirements as a guide for sustainability disclosures that could be included in the integrated reports of South African companies. Statistical techniques were then used to determine if significant trends in disclosure were observable in the integrated reports from 2011 to 2015.

¹ The G4 Guidelines were superseded by the GRI Sustainability Reporting Standards in 2016.

The results show that there was a notable change in how sustainability disclosures are presented in the integrated reports, although there is no meaningful change in the number and type of sustainability disclosures. Industry classification, and the age and size of companies were also found to be significant in the quantity and quality of sustainability disclosures observed.

This study provides insight into the integrated and sustainability disclosure practices of South African listed companies. It also examines their compliance with the guidance provided in the Framework relating to the preparation of fully integrated reports.

II Commonly Used Terms and abbreviations

BBBEE	Broad-based Black Economic Empowerment
CEO	Chief executive officer
CRD	Corporate Reporting Dialogue released by the IIRC
Framework	The International <IR> Framework issued by the IIRC in 2013
G4	Sustainability Reporting Guidelines issued by the GRI in 2013
GRI	Global Reporting Initiative
IIRC	International Integrated Reporting Council
<IR>	Integrated Reporting
JSE	Johannesburg Stock Exchange Limited
KPI	Key performance indicator

III List of figures

Figure 1 Integration of Sustainability Disclosures	87
Figure 2 Overall integration by Industry - 2011	89
Figure 3 Overall integration by Industry - 2015.....	89
Figure 4 Sustainability KPIs.....	92
Figure 5 Sustainability KPIs by Industry - 2011	93
Figure 6 Sustainability KPIs by Industry - 2015	93
Figure 7 Inclusion of material sustainability disclosures within integrated reports	95
Figure 8 Material sustainability disclosures by industry - 2011	97
Figure 9 Material sustainability disclosures by industry - 2015.....	97
Figure 10 Balance between good and bad news sustainability disclosures	99
Figure 11 Balance between good and bad news by industry – 2011.....	100
Figure 12 Balance between good and bad news by industry - 2015	100
Figure 13 Histogram showing total number of disclosures per company.....	102
Figure 14 Distribution of total sustainability disclosures	103
Figure 15 Descriptive statistics for sustainability disclosure categories	106
Figure 16 Sustainability disclosures by category and company.....	107
Figure 17 Sustainability disclosures by category and industry classification for 2011 and 2015.....	112
Figure 18 Inclusion of sustainability disclosures in management commentary.....	116
Figure 19 Management’s sustainability commentary by category and industry for 2011 and 2015.....	120
Figure 20 K-means cluster analysis for 2011.....	125
Figure 21 Cluster split per industry - 2011	127
Figure 22 K-means cluster analysis for 2015.....	129
Figure 23 Cluster split per industry – 2015	130

IV List of tables

Table 1 Corporate Sustainability Framework (Amini & Bienstock, 2014).....	17
Table 2 Motivations for reporting or non-reporting of sustainability issues (Kolk, 2010)	40
Table 3 Scope of corporate reporting standards or frameworks through the lens of <IR>. Source: The International Integrated Reporting Council (2015).....	66
Table 4 Sample selection	76
Table 5 Sign test - change in overall integration.....	88
Table 6 Sign test – change is use of KPIs	92
Table 7 Sign test - change in material disclosures	96
Table 8 Sign test - change in good vs bad new	99
Table 9 Descriptive statistics for total sustainability disclosures	102
Table 10 Heat map comparing the number of sustainability disclosures to the extent of integration of sustainability disclosures in integrated reports.....	104
Table 11 Results of paired t-test to determine significant difference in number of disclosures per category	110
Table 12 Descriptive statistics - sustainability disclosures by industry	111
Table 13 Descriptive statistics for sustainability commentary categories of management.....	118
Table 14. Spearman's correlation coefficient - 2011.....	122
Table 15. Spearman's correlation coefficient – 2015.....	122
Table 16 Reclassified data for the purpose of performing a Fisher's Exact test	140

Chapter 1 Introduction

The field of sustainability has developed over the last three decades, since the World Commission on Environment and Development (WCED) coined the term 'sustainable development' in 1987 (Bruntland, 1987). Since then, the term sustainability has come to mean the economic, environmental and social viability of an organisation² in the long term (Global Reporting Initiative, 2013a). Following this, sustainability reporting is the mechanism whereby organisations communicate their activities relating to their economic, environmental and social impact to a variety of stakeholders (Ioannou & Serafeim, 2014). With the recent emergence of integrated reporting there has been a shift in the understanding and application of sustainability reporting practices (Global Reporting Initiative, 2013c). Companies previously prepared a separate sustainability report, according to the guidelines provided by bodies such as the Global Reporting Initiative ('GRI'). However, they are now encouraged to integrate sustainability issues within their integrated reports, as far as they relate to their value creation (Institute of Directors of Southern Africa, 2014).

However, the purposes of sustainability reporting and integrated reporting are not completely aligned. Sustainability reporting aims to provide a broad range of stakeholders with information on how the organisation is creating a sustainable environment and society (Global Reporting Initiative, 2013a). Integrated reporting on the other hand, is aimed at providers of capital, to report on how organisations create value over the short, medium, and long term by interacting with their internal and external environment (International Integrated Reporting Council, 2013). Some elements of sustainability reporting and integrated reporting overlap, but some conflict, and organisations interpret the requirements of each differently (PwC, 2014), with differences in how sustainability information is included in integrated reports.

The purpose of this study is to investigate the trends in sustainability disclosures in the integrated reports of South African listed companies. This investigation will be done by examining firstly how companies disclose sustainability information, and

² The term 'organisation' has been chosen in this work to refer to any company, firm, business or other organisation. Where research has been undertaken on companies specifically the term 'company' is used.

secondly the specific disclosures that are included. This study will contribute to the body of literature on sustainability reporting, and integrated reporting.

This research report will begin with an investigation of the relevant literature in Chapter 2. An understanding of the concept of sustainability, as well as sustainability reporting will be developed. This will be followed by a discussion on integrated reporting. The relationship between sustainability and integrated reporting will be discussed. Finally, this literature review covers studies that have looked at these two forms of reporting together.

The research design and methodology will be outlined in Chapter 3. This will be followed by a presentation of the results of the analysis and a discussion of the findings in Chapter 4. The report will conclude in Chapter 5 with a summary of the findings, and a discussion of study limitations and areas for further research.

Chapter 2 Literature Review

This literature review will examine the concept of sustainability, and the reporting thereof, and then review the concept of integrated reporting and the literature on this topic. Finally, it will look at the literature on the relationship between these two types of reporting, and the trends observed to date in how organisations include sustainability disclosures in their integrated reports.

2.1 Corporate Sustainability

Alfred Rappaport, in 1986, published his book *Creating shareholder value: the new standard for business performance*, where he defined the objective of an organisation to be the creation of shareholder value (Rappaport, 1986). This was widely accepted as the guiding principle for business operations during the ensuing decades (Winfield, Hull, & Fried, 2014).

However, Anderson (2014) states that a key reason for forming an organisation is the perpetual succession that exists for incorporated entities, and that there is little point in having perpetual succession if organisations enter into activities that will not allow them to continue in operation and add value over the long term, rather than only the short- and medium-terms.

Gray (2006) argues, also, that in the Western world the traditional notion of capitalism, and the pursuit of profits at all costs (usually short-term profits), is increasingly leading to a world where the rich become richer, to the detriment of the poor, the environment, and society in general. He identified that a change in the system of accounting is needed, in order to facilitate the preservation of societies and the natural environment. He states that traditional accounting, used as a tool of capitalists, does not answer these broader needs of society. He paints a dire picture of the future of society if organisations do not shift their mind-set in accounting, as well as reporting. Supporting this, Lehman (2001) calls for a “fundamental transformation” of capitalism to halt the tide of social injustices, and he cites Puxty (1986) who observes that the “structural strengths” of corporations can be used to the advantage of society to implement meaningful change in the environmental and social spheres.

The King IV Report on Corporate Governance for South Africa, issued in 2016, furthermore identifies that, as corporate citizens, organisations have rights and obligations relating to the environment and society, in addition to their economic responsibilities (Institute of Directors of Southern Africa, 2016). An organisation therefore needs to have operations that are sustainable in the short, medium and long term, in order to meet the objective of creating shareholder value, as set out by Rappaport (1986), and consider a broader set of needs than just those of their shareholders (Winfield et al., 2014).

In the remainder of this section the concept of sustainability will be explored, by examining definitions of sustainability and the application of sustainability within a corporate context. This will be followed by a discussion of how an organisation identifies its stakeholders and is accountable to them. The adoption of sustainability practices will then be explored, including the corporate factors that drive their adoption. Finally, the business case for sustainability will be examined, which is a strong motivating factor for organisations to engage in sustainability practices.

2.1.1 The development of the concept of sustainability and sustainable development

According to the Oxford Dictionary ‘sustainable’ means “able to be maintained at a certain rate or level” (Oxford Dictionaries, 2015). In order for an organisation’s operations to be able to be maintained, and even grown, in the long term, it is necessary to consider the economic, environmental and social sustainability of the organisation and its operations (Amini & Bienstock, 2014).

The term ‘sustainable development’ was first introduced by the World Commission on Environment and Development (‘WCED’) in 1987 and was defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. The WCED expanded on this, emphasising that economic growth is essential, but policymakers should take cognisance of the world’s poor and the environment (Bruntland, 1987). Schaltegger and Burritt (2005) differentiate between corporate sustainability and sustainable development, defining corporate sustainability as the end goal of the process, when an organisation has

achieved sustainability, while sustainable development constitutes the process of becoming sustainable.

Sustainability depends on managing the economic, environmental and social viability of an organisation. The economic aspect of sustainability is made up of good business practice that will allow a business to survive in the long term (Baumgartner & Ebner, 2010). Robert, et al. (2002) identified that ecological or environmental sustainability incorporates minimising the impact of mining natural resources from the earth's crust, by substituting scarce resources for resources that are abundantly available, minimising the impact of waste, replacing non-degradable waste with materials that are naturally degradable, and minimising the impact of over-harvesting and other forms of degradation of nature. Social sustainability is doing as much as possible, over and above the ecological sustainability actions taken, to meet the needs of people who are currently affected by an organisation, as well those who will be affected in the future (Robèrt, et al., 2002).

From its beginnings in the 1980s, the focus of sustainable development and sustainability was primarily on the environmental impact of business operations. But in the mid-1990s organisations around the globe began to come under pressure as a result of numerous social issues that were beginning to be identified, such as workers' rights and the use of child labour. In 2015 the United Nations published their Sustainable Development Goals, in an attempt to help organisations to balance the three moral imperatives of the satisfaction of human needs, ensuring social equity, and respect for environmental limitations (Holden, Linnerud, & Banister, 2017; United Nations, 2018). Business managers therefore began to look for solutions to these problems, and began to give a more significant weighting to social issues when developing their strategies and considering their operations (Holliday, Schmidheiny, & Watts, 2002).

There are many differing definitions of sustainability in the literature, which incorporate environmental, social, ethical and governance issues in different combinations (Christen & Schmidt, 2012; Searcy & Buslovich, 2014). It is important to identify what is meant by the term in each context. Therefore, when referring to 'sustainability' in this work, the term is intended to refer to the economic, environmental, and social sustainability of a business, with particular emphasis on

environmental and social sustainability. This emphasis was chosen to align with the disclosure categories identified by the Global Reporting Initiative ('GRI') in their G4 Guidelines released in 2013, which will be discussed in more detail in later sections. This is because organisations focus on economic sustainability as a minimum to ensure survival, but a holistic view enhances their overall sustainability. Many scholars use the term 'social responsibility' in a similar context.

2.1.2 Organisational application of the sustainability concept

Sustainability, as discussed in the previous section, is generally accepted to refer to the economic, environmental, and social sustainability of an organisation. Organisations are required to incorporate each of these three elements into their business strategies and practices in order to become viable in the long term (Global Reporting Initiative, 2013a). Amini and Bienstock (2014) identify five dimensions of sustainability and outlined the activities that an organisation is likely to enter into, depending on its level of sophistication relating to its sustainability. Their corporate sustainability framework is presented in Table 1 and gives a broad perspective of the activities that an organisation can, and in their opinion, should participate in. The level of sophistication is indicated as I = least sophisticated, to IV = most sophisticated.

Corporate Sustainability Framework				
	I	II	III	IV
Business Level Applications & Communication	Ill-defined sustainability initiatives within organisation; no external communication with respect to corporate sustainability ('CS') activities	Tactical level sustainability activities; few external communications with respect to CS activities	Strategic level sustainability activities; some quantification & external communication of CS performance	Intrinsically sustainable zero-waste oriented organisation; public discourse of highly granulated sustainability performance data
Scope of Organisational Focus	No supply chain interaction	Limited interaction with supply chain	Some information/resource sharing within supply chain	Significant information, resource sharing & optimisation efforts across supply chain
Sustainability Oriented Innovation	Innovation activities are not sustainability related	Some awareness of relationship between innovation and sustainability	Innovation activities involve multiple stakeholders	Zero-waste approach involving significant sustainability oriented innovation efforts that involve multiple stakeholders
Economic/ Ecology- Environmental/ Equity-Social Emphasis	Emphasis solely on economic sustainability	Primary emphasis on economic sustainability, tentative efforts towards ecological-environmental sustainability	Triple bottom line approach, economic, ecological-environmental, equity-social sustainability	Organisation embraces a "triple top line" sustainability approach
Compliance stance	Sustainability activities limited to minimal efforts at regulatory compliance	Sustainability activities increase beyond minimal regulatory compliance, but are not systematically related to organisational strategy	Incorporation of regulatory compliance within organisational strategy; participation in development & evolution of sustainability regulation	Recognised industry thought leader that embraces and encourages zero-waste approach to sustainability regulation; recognition of importance of public-private partnerships

Table 1 Corporate Sustainability Framework (Amini & Bienstock, 2014)

The 'business level applications and communication' dimension refers to an organisation's strategic consideration and incorporation of economic, environmental,

and social issues into their business practices, and their communication of these strategies and practices outside the organisation. Organisations' strategies can range from a lack of strategic consideration and communication, to a position where sustainability issues are inherently incorporated into all the strategic considerations of the organisation, as well as all communication. This communication takes the form of annual corporate reporting to shareholders and other stakeholders, as well as use of other forms of media and communication externally, and communications with employees internally (Amini & Bienstock, 2014).

The 'scope of organisational focus' dimension reflects the necessity for sustainable organisations to extend their sustainability practices beyond their own operations, into their supply chain. By enhancing the sustainability practices of organisations in the supply chain an organisation can increase their own sustainability because the inputs to their business will have had a minimal impact on the environment and society (Amini & Bienstock, 2014).

Innovation is required to design and produce goods and provide services that are environmentally friendly and socially responsible, as identified in the 'Sustainability Oriented Innovation' dimension, however such sustainable innovation can only occur if organisations are taking the environment and 'eco-efficiency' seriously (Holliday, et al., 2002). Schaltegger and Burritt (2005) note that the integration of environmental effectiveness and efficiency, as well as social effectiveness and efficiency, is the greatest challenge in managing sustainability within an organisation.

Amini and Bienstock (2014) describe a new dimension to the traditional 'triple bottom line' of Elkington (2004). The triple bottom line promotes business practices in which the profits of an organisation are considered together with the people and planet that are affected by its operations. Amini and Bienstock modified this by introducing the phrase 'triple top line' to describe a scenario where organisations consider "economic, ecology-environmental and equity-social" concerns when setting their business strategy, rather than only considering the effect of these areas on the profits of the organisation. As organisations become more sophisticated in their sustainability practices they will incorporate this dimension of thinking into all aspects of their business. This will occur as managers of different sections of an organisation come together to discuss sustainability issues and create solutions together, creating

a greater degree of cohesion within the organisation (Adams & McNicholas, 2007; George, Siti-Nabiha, Jalaludin, & Abdalla, 2016).

The final dimension of Amini and Bienstock (2014) relates to organisations' maturity relating to laws and regulations. Organisations that are at a lower level of sophistication with respect to their sustainability will tend to only meet the minimum requirements of any laws and regulations, while organisations at a higher level of sophistication will tend to go beyond the requirements and implement real change.

As mentioned previously, there are a myriad definitions and meanings of sustainability in the literature, and Christen and Schmidt (2012) identify a general lack of understanding of what 'sustainability' means as the cause of the inability of those promoting sustainability to create real change and action. This creates an environment where organisations can justify a large range of actions under the banner of sustainability. They argue that rather than a definition, which may be limiting, a total mind-set change needs to occur, where organisations, and indeed society as a whole, consider a meta-approach to the questions 'What is to be sustained?' and 'How can it be sustained?' and thereby behaviour can be changed. They state that it is critical for organisations to consider the integrated nature of the environment and society, and the effect of business actions on these two systems. In order to avoid the situation where organisations use an array of definitions of sustainability to justify sub-standard performance in these areas, Christen and Schmidt suggest that a principle-based approach is more appropriate. They advocate for a set of sub-minimum standards that should be satisfied, relating to quality of life and the environment, as well as financial sustainability, and the principle requirement that no single criteria can be disregarded in order to satisfy another criterion. This approach, together with their final suggested principle of allowing organisations to choose their own actions within these parameters, allows the flexibility that is required to meet the wide range of needs and circumstances in the business community.

2.1.3 A stakeholder approach to sustainability

To become sustainable an organisation must consider the needs of all its stakeholders. Stakeholders have been defined as "any group or individual who can

affect or is affected by the achievement of the [organisation's] objectives” (Freeman, 1984). Post, et al. (2002) offers a slightly different definition: “The stakeholders in an [organisation] are individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and who are therefore its potential beneficiaries and/or risk bearers”. Stakeholders can therefore include owners, employees, customers and suppliers, as well as government, local community organisations, competitors and even the media. Individuals may fall into more than one category, for example an employee of an organisation, may also be a shareholder if employees are issued with shares, and in addition they may live in the community where the organisation operates. The needs of the individual in each of their capacities will be different (Winfield, et al., 2014).

If one were to accept the argument that the primary objective of business is to maximise shareholder wealth or value, as put forward by Rappaport in 1986, then organisations would not have any responsibility to consider the needs of other stakeholders. However, it has been argued that businesses do in fact have a responsibility for other stakeholders' legitimate needs because of the contribution that these other stakeholders make to the value of the organisation, such as the service of their employees, or the value of the natural resources that are consumed. The powerful position that large organisations hold means that they have a responsibility to consider broader stakeholders' needs. Organisations therefore should take note of the needs of all their stakeholders (Winfield, et al., 2014).

These views are supported by Rappaport's further assertions. He states that the defining objective of an organisation is to increase shareholder wealth (1986). He argues that organisations cannot take on a socially responsible role, because they lack a legal mandate to fulfil those responsibilities. He notes that managers frequently use the need to meet the needs of all stakeholders as an excuse for deficient performance. However he states that ultimately the way to benefit all stakeholders is by operating the organisation efficiently and creating long term value (Rappaport, 1999).

Jensen (2001) agrees with the views of Rappaport (1999), reasoning that an organisation cannot have multiple objectives such as to maximise the value for all stakeholders, including shareholders because management may then lack purpose

and direction. He outlines the concept of 'enlightened value maximization', stating that "we cannot maximize the long term market value of an organization if we ignore or mistreat any important constituency" (Jensen, 2001, p.16). Brown and Forster (2013) also argue that when organisations consider their sustainability activities, priority should always be given to the primary stakeholders of the organisation, but where actions of the organisation are harmful to any group of stakeholders, these violate their rights.

Stakeholders of an organisation can be separated into various categories. One approach to categorising stakeholders is to group them under voluntary or involuntary stakeholders. Voluntary stakeholders would be investors, employees, and customers. Developing relationships with this category should focus on actions that are mutually beneficial to both parties. Involuntary stakeholders include surrounding communities affected by pollution or other negative outcomes of the organisation's operations. In these cases the relationships should be based on minimising the negative impact of operations on involuntary stakeholders (Post, et al., 2002). It is involuntary stakeholders who are generally the focus of sustainability activities of an organisation.

Each organisation is part of a network of both voluntary and involuntary stakeholders, and forming and maintaining relationships with each of these stakeholders is critical to the long term success, and sustainability, of the organisation. Post, et al. (2002) conducted research examining three major global companies – Cummins Engine Company, Motorola and Royal Dutch/Shell Group ('Shell'), all of which exemplified excellent stakeholder relationships, based on their surveys of a broader sample of organisations. Based on their study of these companies, Post, et al. categorise stakeholders into three categories. These are, firstly, an organisation's resource base (consisting of investors and lenders, employees and consumers), secondly, an organisation's industry structure (made up of other parties in the supply chain, joint venture partners, regulatory authorities, and unions), and finally, an organisation's social political stakeholders (governments, local communities and private non-governmental organization ('NGOs')). In the three companies examined, the critical stakeholder relationships in each of the categories varied, based on circumstances. This demonstrates that no two organisations will face the same conditions, and each must necessarily determine which stakeholders are most critical to its success.

In addition, different stakeholder relationships will be of greater importance at different times. The challenge for an organisation is to identify and understand each relationship, and to address the needs and challenges of each group (Post, et al., 2002), which requires ongoing engagement with stakeholders.

When organisations and stakeholders engage with each other the needs of both parties can better be served, because, as Follett (1918) asserts, when various parties come together, each aware of their own needs and place within the group, the best outcome for the entire group can be realised. Adams and McNicholas (2007) further argue that it is necessary to engage with stakeholders in order for change to occur in the sustainability practices of an organisation. This engagement will lead to old perceptions necessarily being broken down, in order for new perceptions to be formed, which can lead to appropriate action by the organisation. But this will only be effective where stakeholders are able to express their views and concerns freely, without fearing reprisal.

It is critical that all stakeholders, both those that are economically powerful, and those that are economically weak, are given this opportunity to engage with organisations concerning their views and needs. Typically economically weak stakeholders are excluded from debates of this kind, and although there are powerful tools, such as the internet, to engage with stakeholders, the economically weak have still tended to be marginalised (Unerman & Bennett, 2004).

This was evidenced in a case study examining organisational engagement with stakeholders documented by O'Dwyer (2005) who finds that insufficient attention was paid to the needs of stakeholders, and in fact they were silenced by the top leadership of the organisation. The relative positions of power between the leadership of the organisation and the 'involuntary stakeholders' (Post, et al., 2002) was identified by O'Dwyer as a key concern in resolving this lack of focus on all stakeholders (O'Dwyer, 2005). This demonstrates that the ideal, as put forward by Adams and McNicholas (2007), is not being achieved in many organisations.

This finding contrasted the research on Cummins, Motorola, and Shell, which were each considered to be leaders in stakeholder relationship management. Post et al.

(2002) find that these companies found it necessary to explicitly develop relationships with stakeholders falling into the 'social-political' category of stakeholders. These three companies are successful global organisations, which have succeeded in surviving the events of the last decade in the global economy. It is therefore worth noting that the management of these companies considered these relationships to be key to their success. Although there is no hard evidence to prove that the success of these companies is due to their focus on stakeholder relationships, Post, et al. observe that there have been no negative effects on the companies because of this focus.

Post, et al. (2002) conclude that where stakeholder thinking was institutionalised and considered at the highest levels of management, organisations were most likely to achieve a true stakeholder perspective in their decision-making. An example of this was Shell, which implemented its own version of the classic 'Triple Bottom Line' ('TBL') concept (refer to section 2.2.2 for a further discussion of TBL) in response to external events that exposed the need for the directors to consider a broader range of issues than profits alone. This internal TBL was given highest priority at all levels of management and was considered to be a key part of the success of the company.

Ultimately an organisation that considers the needs of all stakeholders will be able to develop better strategies. It will also be more effective in creating long term sustainability for the organisation (Institute of Directors of Southern Africa, 2016).

2.1.4 Stakeholder accountability

After identifying its stakeholders as outlined above, an organisation then needs to be accountable to these stakeholders. It has been suggested that in order for an organisation to be sustainable in the long term it must be accountable to all of its stakeholders, including shareholders, employees, clients, suppliers, public authorities, communities and financial partners (Perrini & Tencati, 2006).

According to Adams (2004) "accountability can be defined as the 'giving of an account' encompassing [...] both the 'account' itself and the process followed in providing that account to stakeholders" (Adams, 2004, p. 732). Organisations use various forms of communication to engage with stakeholders in order to provide this

account. These include various reporting functions, such as stand-alone sustainability reports or the inclusion in the annual report of sustainability reporting, as well as direct engagement with stakeholders such as through surveys (Owen, Swift, & Hunt, 2001).

Burrit and Schaltegger (2010) discuss the forms of sustainability accounting and reporting that were prevalent at the time. They show that sustainability accounting can be 'outside-in' or 'inside-out', or a combination of the two. In the outside-in stakeholder approach the organisation manages the information needs of external parties', as typified by the Global Reporting Initiative (refer to section 2.2.2), and the information to be reported is set by a party external to the organisation. They assert that this approach may be prone to exaggeration of the environmental sustainability activities of the organisation, or green-washing, and may be treated with mistrust. Green-washing is the practice of either emphasising positive environmental impacts, or withholding negative environmental impacts, with the aim of painting a picture of an environmentally responsible organisation. In the inside-out approach the management of the organisation defines its business strategy and implements appropriate measures to achieve that strategy. Information for sustainability accounting and reporting would naturally be gathered with the inside-out approach because the organisation uses the information in order to make decisions and to decide on its strategy (Burritt & Schaltegger, 2010). All decisions taken within an organisation should be guided by the principle of building relationships with all stakeholders (Perrini & Tencati, 2006).

Perrini and Tencati (2006) highlight the need for organisations to implement systems to enhance their sustainability accountability and go beyond merely reporting, to relationship building. They present *Sustainability evaluation and reporting systems* ('SERS'), which would allow organisations to measure and control their actions, to effectively manage their stakeholder relationships. The SERS comprised an overall reporting system, including the annual report, the social report, the environmental report and a set of integrated performance indicators. Key performance indicators ('KPIs') for corporate sustainability were identified as a critical aspect of stakeholder accountability, particularly those KPIs that are cross-cutting, or KPIs that relate to the financial implications of the non-financial activities of an organisation.

Ideally accountability to all stakeholders should lead to reform in the conduct of organisations. However, Owen, et al. (2001) find evidence that stakeholder relationships were being 'managed', because of limitations placed on organisations by the overarching business imperatives of increasing shareholder value. Organisations were found to report on aspects of their activities that build their reputation and to focus on the needs of those stakeholders who provide capital and other resources which the organisation needs, and neglect those stakeholders that do not provide such value (Ullmann, 1985). Sternberg (1999) also raises concerns that making managers accountable to too wide a range of stakeholders leads to a lack of accountability.

However, other studies find that the economic performance of an organisation can in fact be improved by engaging with all stakeholders and addressing their individual needs (Burritt & Schaltegger, 2005). These show that transparency in disclosures provided by organisations increase the confidence of stakeholders in those organisations (Archambeault, DeZoort, & Holt, 2008).

2.1.5 Adoption of organisational sustainability practices

Thus, findings of research indicate that engaging with stakeholders and being accountable to them can increase the value created for shareholders. Despite this, the adoption of sustainability practices varies widely, as will be outlined in this section.

As organisations mature with regard to their sustainability efforts, they tend to move along a continuum of potential strategies. These range from applying an introverted, risk mitigation strategy to a conservative, efficiency-oriented strategy, then to an extroverted, legitimisation strategy, and finally to a visionary or holistic strategy (Baumgartner & Ebner, 2010). These stages of the continuum can also be described as ranging from reactive to proactive in the management of sustainability (Torugsa, O'Donohue, & Hecker, 2013).

The introverted strategy identified by Baumgartner and Ebner is where organisations focus purely on meeting the minimum requirements of laws or regulations in order to minimise risks. The conservative strategy is where an organisation is focussed on

improving internal cost efficiency, and incorporates sustainability into many decisions, although social concerns are less important because they have less impact on efficiency. The extroverted strategy is where organisations do more than the minimum requirements but ensure that their public relations departments promote their activities to increase their corporate legitimacy (refer to section 2.2.1 for further discussion on legitimacy). It is noted that this strategy can be seen as green-washing. The visionary or holistic strategy is where organisations strive to be market leaders in sustainability (Baumgartner & Ebner, 2010).

In the South African context, Holliday, et al. (2002) quote Carlos Pone, the head of ABB's operations in South Africa and South America, who expressed the view that "corporate social investment has been a priority for many years in South Africa because of the disparities in society" and that a legal framework was beginning to be formed to govern the environmental issues facing businesses (Holliday, et al., 2002, p. 21). He concludes that South African business wants to do the right things for the right reasons. This is partly true because of the South African Constitution, which extends the responsibility to individuals and organisations to promote the rights of all citizens (Tweedie & Martinov-Bennie, 2015).

A number of studies around the world have examined the adoption of sustainability practices by organisations. A selection of these studies, are documented below.

In their study of organisations in the Czech Republic, Krechovská and Procházková (2014) find that most organisations, especially small and medium-sized organisations (SMEs), are not incorporating sustainability into their corporate strategies, despite recognising the importance of sustainability. Most of the organisations studied (ranging from large to small and medium-sized) had the financial or economic sustainability of the organisation as their primary focus, and they indicated that the pressure for economic sustainability outweighed the pressure to increase broader sustainability. However, in a study of SMEs in Australia, Torugsa, et al. (2013) find that SMEs which had a shared vision, stakeholder management and strategic proactivity in place were able to overcome funding constraints to sustainability practices, and in fact showed superior financial performance.

These organisational characteristics are similar to those witnessed in the Global 100 Most Sustainable Corporations in the World survey, conducted by Canadian investment advisory firm Corporate Knights. In the 2015 survey 85% of the 100 most sustainable organisations identified used the achievement of sustainability targets to determine the bonuses of their executives (Magureanu, 2015), demonstrating that organisations that focus on sustainability issues at the highest levels of governance achieve can be highly successful.

Tregidga, et al. (2014) conducted a longitudinal study of organisations in New Zealand from 1992 to 2010, examining their annual reports and identifying how the organisations self-reported on their sustainability activities. They show three distinct phases, which reflect global developments in sustainability reporting. In the period from 1992 to 1999 organisations portrayed themselves as being environmentally responsible and compliant with the law. Between 2000 and 2004 organisations represented themselves as leaders in sustainable development. This coincided with the establishment of the Global Reporting Initiative (refer to section 2.2.2) and a growing interest in sustainability. Organisations strove to show themselves as responsible, transparent and knowledgeable leaders in the field, and that they could be trusted by society. The final period, from 2005 to 2010, saw the emergence of strategically 'good' organisations – organisations that are good at managing their environmental and social concerns, as well as their business practice. Tregidga, et al. show that the global recession of 2008-2009 influenced the strategic nature of these business practices, because financial sustainability became paramount. However, businesses could not completely abandon their social and environmental efforts, because of the reputation risk. Organisations therefore had to become strategic in selecting and implementing sustainability projects and reported strategically on their efforts to get maximum benefit from them. Tregidga, et al. find that this final identity reflected a maturing of the organisations, but at the same time a weakening of their sustainability efforts. This was because organisations were increasingly selective in their social and environmental efforts to ensure their financial sustainability. The studies reflected concern that organisations are increasingly using their sustainability disclosures to portray themselves as sustainable organisations, to maintain legitimacy and to avoid public and regulatory criticism, but this is not a reflection of becoming more environmentally and socially sustainable. This is supported by the findings of Narayanan and Adams (2017), who show that

organisations which are focused primarily on the financial outcomes of their actions are less likely to engage in sustainable practices.

All these studies indicate that where organisations extend their focus beyond economic success, and particularly where the top management have this broader focus, they are able to incorporate sustainability practices into their organisational priorities and strategies.

2.1.6 The business case for sustainability

Organisations do not need to sacrifice economic returns for sustainability. Bodies such as the World Business Council for Sustainable Development ('WBCSD'), formed in 1992, have worked to encourage businesses to focus on sustainable development, and create value in the economic, environmental and social spheres. The WBCSD includes more than 200 organisations whose managers believe that sustainable practices add value to an organisation (WBCSD, 2018).

Making organisational practices sustainable adds value for all stakeholders, including shareholders, employees, creditors and society. This is the basis of the business case for creating sustainable organisations (Burritt & Schaltegger, 2010), although it may be the case that stakeholders have opposing needs. If not managed appropriately, these can cause conflict which decreases the value of the organisation (Shaoul, 1998).

An additional aspect of the value of an organisation is its reputation, which is critical to its success. Scandals relating to environmental and social issues can do irrevocable damage to a brand. This strengthens the argument for managers to proactively address environmental and social concerns (Business and Sustainable Development Commission, 2017; Holliday, et al., 2002).

The Business & Sustainable Development Commission states: "The business case for sustainable development is strong already: it opens up new opportunities and big efficiency gains; it drives innovation; and it enhances reputations. With a reputation for sustainability, [organisations] attract and retain employees, consumers, B2B customers and investors, and they secure their licence to operate" (Business and

Sustainable Development Commission, 2017, p. 7). With that strong statement the Commission strives to work with business leaders to make their business practices more sustainable.

A growing number of studies support the view that there is a valid business case for sustainability. These studies include Torugsa, et al. (2013) (referred to in section 2.1.5), 30 studies analysed by the United Nations Environment Programme Finance Initiative & Mercer (UNEP-Fi, Mercer, & Asset Management Working Group., 2007), and over 2 000 companies in the US examined over a 20 year period (Khan, Serafeim, & Yoon, 2016). It has been noted repeatedly however that it is not possible to prove that an organisation is more profitable because of sustainability interventions. This is because there are too many variables at play. It may be also that organisations are not more profitable because of sustainability interventions, but that they are able to implement these interventions because they are already profitable (Holliday, et al., 2002).

This is supported by the view that organisations with strong economic performance receive greater pressure from society to engage in social activities, and are in a financial position to be able to engage in these activities. Conversely, those organisations that perform poorly economically will focus attention on improving their economic situation, and divert funds from social activities and disclosures, particularly voluntary social activities (Chen, Feldmann, & Tang, 2015; Ullmann, 1985). Lys, et al. (2015) put forward a different perspective – that organisations incur sustainability expenses when future profitability is expected, and the sustainability spend acts as a signal to investors to expect future positive performance.

However, it has been found that organisations with better sustainability have greater access to capital, and at a lower cost. When investors are allocating scarce resources, organisations that have better stakeholder relationships and which are more transparent engender more trust from stakeholders, including current and potential investors. Their ability to generate revenue and profits are also increased because of these improved stakeholder relationships. The managers of such organisations are perceived as prioritising long term value creation for the organisation, and are therefore favoured (Cheng, Ioannou, & Serafeim, 2014).

This is confirmed by a study of French organisations between 2007 and 2009 by Ducassy (2013). The study finds that in the long term there is no significant link between financial performance and an organisations sustainability. However, in the six months after the financial crisis in 2007 more sustainable organisations showed better financial performance. She concludes that the organisations built up a 'reservoir of goodwill' which allowed the recession to have a less detrimental economic effect on them than other organisations. It has been asserted that an organisation's sustainability can be a proxy for management quality, in so far as it reflects the organisation's ability to respond to long term trends and maintain a competitive advantage (Fox, M., Forrest, S., Ling, A. & Lynch, M. (2007), as cited in UNEP & Mercer, 2007).

Furthering this work, Dixon-Fowler, Slater, Johnson, Ellstrand and Romi (2013) conduct a meta-analysis of 71 studies that examine the relationship between sustainability performance and financial performance. They were in search of an answer to the question "When does it pay to be green?", rather than simply "Does it pay to be green?" Their analysis revealed that there is a strong positive relationship between sustainability performance and financial performance. This was more pronounced for small organisations and organisations based in the United States than for larger, international organisations. There was no significant difference related to whether organisations' sustainability strategies were proactive or reactive, whether organisations were public or private and no difference by industry type.

Further benefits are identified in the study of Cummins, Motorola and Shell by Post, et al. (2002), who observed a number of positive impacts of a focus on stakeholder-oriented sustainability policies by these three companies. These included, firstly, the survival of the companies, when many other organisations in their industries were failing. Secondly the avoidance of costs was a benefit. Thirdly, the continued acceptance and implementation of sustainability policies by successive boards of directors. Finally, benefits included the recognition and adoption of similar policies in organisations observing the successful implementation of such strategies by these three companies.

The benefits of sustainability practices extend beyond the organisation itself to investors in the organisation. Holliday, et al. (2002) notes that investors looking for

quick profits will not be interested in investing in organisations that have sound sustainability practices. However, for investors looking to invest for the long term, organisations that are sustainable are likely to provide better returns because their sustainable behaviours will add continued value. This was borne out by the fact that the Dow Jones Sustainability Index consistently outperformed the Dow Jones Global Index between 1999, its inception date, and 2002, the time of their writing.

In South Africa the same has held true, with long term returns on the Socially Responsible Investment Index of the Johannesburg Stock Exchange (JSE) generating higher returns than other organisations listed on the JSE. In the short term there was no significant difference, but sustainability investing is long term investing, as noted previously (Labuschagne & Swartz, 2013).

The JSE launched the Socially Responsible Investment Index (JSE SRI Index) in May 2004, to (Johannesburg Stock Exchange Limited, 2014b, p. 2):

- “identify those [organisations] listed on the JSE that integrate the principles of the triple bottom line and good governance into their business activities;
- “provide a tool for a broad holistic assessment of [organisation] policies and practices against globally aligned and locally relevant corporate responsibility standards;
- “serve as a facilitation vehicle for responsible investment for investors looking for non-financial risk variables to include in investment decisions, as such risks do carry the potential to have significant financial impacts;
- “contribute to the development of responsible business practice in South Africa and beyond”

Organisations are included in the SRI index based on the findings of Ethical Investment Research Services (EIRIS) who are commissioned by the JSE to conduct research on companies' sustainability. EIRIS evaluates all organisations listed on the JSE each year based on all publicly available information, and those organisations meeting the requirements in the categories of the environment, society, governance, and climate change are automatically included in the index. This index provides investors with an opportunity to invest in organisations that have been assessed to have good sustainability or social responsibility policies, practices and reporting (Johannesburg Stock Exchange Limited, 2014a).

In conclusion, although it hasn't been conclusively shown that organisations that engage in sustainability activities perform better financially, it has been shown that organisations that perform better financially tend to be more sustainable. In addition, the increase in reporting of sustainability practices observed, to at least some degree of compliance with codes such as the Global Reporting Initiative, seem to indicate that managers, who are intrinsically profit-driven, see a financial value in the practice (Gray, 2006).

2.1.7 Summary

Business organisations have the primary objective of increasing shareholder value. However, the literature suggests that they need to consider the impact of their operations on the environment and society in order to be sustainable in the long term, and therefore to add value for shareholders in the long term. Each organisation will have a large number of stakeholders, both voluntary and involuntary, which are affected by their operations, and the valid concerns of each stakeholder group should be considered by the organisation when determining their objectives and strategies. If organisations are not accountable to stakeholders, there is not likely to be a change towards more sustainable business practices. It is therefore critical that stakeholders are engaged by organisations, in order that their needs are understood, and can be considered.

There is an increase in the number of organisations that are considering sustainability in their objectives and strategies, although different levels of maturity are observed. These vary from organisations doing the minimum by just meeting legal or regulatory requirements, to organisations that incorporate sustainability into every aspect of their business strategy. A growing body of research indicates that organisations that incorporate sustainability effectively into their strategies receive long term economic benefits through improved financial performance.

The most effective method of communicating sustainability strategies, activities and achievements of an organisation is through sustainability reporting (Morrós Ribera, 2016). Sustainability reporting is explored in more detail in the next section.

2.2 Sustainability Reporting

Sustainability reporting is the mechanism used by organisations to communicate their sustainability activities. It has been asserted that sustainability reporting also establishes and maintains the legitimacy of an organisation (Tilling & Tilt, 2010).

In this section legitimacy theory and sustainability reporting will be explored, examining the relationship between the two. Sustainability reporting will be defined, followed by a discussion of the adoption, and limiting factors, of sustainability reporting. This will be followed by a discussion of the motivations of organisations to report, and the factors affecting the levels of reporting. Finally, it will discuss how organisations report on 'bad news' to their stakeholders, and the validity of sustainability activities and reporting.

2.2.1 Legitimacy theory

To operate in society organisations must be perceived to be legitimate by society as a whole. They must be legitimate in terms of their right to existence in the first place, as well as to their right to continue operating (Deegan, 2002). Organisations are under constant public scrutiny, and although it is accepted that the main goal of business is to increase profitability, there is an expectation that organisations will do this with minimum negative impact on the environment and society (Deegan, Rankin, & Voght, 2002). If society perceives that an organisation has overstepped the bounds of acceptable practice they will no longer support the legitimacy of the organisation, through withholding capital, labour or customer support, and it will eventually cease to operate (Deegan, et al., 2002). In South Africa, the King IV report identified good corporate governance practices, including sustainable development considerations, as a key component of enhancing the legitimacy of an organisation (Institute of Directors of Southern Africa, 2016). Sustainability reporting is necessary in order to communicate the sustainability activities and performance of an organisation, to confirm their legitimacy (Tilling & Tilt, 2010).

Suchman (1995, p. 574) defines legitimacy as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within

some socially constructed system of norms, values, beliefs, and definitions.” At its core, legitimacy is therefore a relationship between an organisation and an ‘audience’. Legitimacy can be seen as either relating to the perceived appropriateness of the actions of an organisation, or the essence or existence of the organisation being considered appropriate in the first place. These concepts cover the three forms of legitimacy, which are, firstly, pragmatic legitimacy, which is based on the satisfaction of the interests and needs of key stakeholders, essentially through an exchange of value. Secondly, an organisation must have moral legitimacy, or do ‘what is right’. Thirdly, cognitive legitimacy is when an organisation is accepted as necessary or inevitable in society (Suchman, 1995).

Organisations are identified as having various phases of legitimacy over their lifetime, with four phases recognised by a number of researchers (Ashforth & Gibbs, 1990; Hearit, 1995; Suchman, 1995; Tilling & Tilt, 2010). The first phase is establishing legitimacy, in the infancy of an organisation’s life. The second phase is maintaining legitimacy, while managing the ongoing public perceptions of the organisation. The third is extending legitimacy, when attempting to enter new domains. The final stage is defending or repairing legitimacy, which occurs whenever there is damage done to the legitimacy of the organisation. Tilling and Tilt (2010) show that organisations will provide greater environmental and social disclosures during the establishment, extension and defence or repair phases of legitimacy. They assert that this is because organisations seek acceptance from their stakeholders at these stages, and sustainability disclosures are an effective communication tool.

2.2.2 Reporting on sustainability

An organisation’s legitimacy and its relationships with stakeholders can be managed through developing a reputation for being environmentally and socially responsible, both through its actions and the communication thereof (Roberts, 1992). Communication is key in establishing the legitimacy of an organisation’s practices and values (Deegan, 2002; Merkl-Davies, Brennan, & Vourvachis, 2011; Suchman, 1995) because it reduces the information asymmetries that exist between different stakeholder groups (Hahn & Lülfs, 2014) and can cause the shareholders to ‘buy in’ to the sustainability activities of the organisation (Nekhili, Nagati, Chtioui, & Rebolledo, 2017).

Sustainability disclosures and reporting are used as a communication tool with stakeholders, who look for information beyond simply financial information (Morrós Ribera, 2016), and sustainability disclosures are one indication of an organisation being socially responsible (Roberts, 1992). These disclosures are often referred to as 'social reporting' or 'ethical reporting', with environmental reporting being considered a subset of ethical reporting. Social reporting is considered to be a broader concept than ethical reporting, encompassing reporting on information about employees, which is not considered to be a part of ethical reporting (Adams, 2002).

These definitions support Gray, et al., who describe the difficulty in defining sustainability reporting because its definitions are so widely contested. They define sustainability reporting to include a broad range of communications, including "both self-reporting by organisations and reporting about organisations by third parties, information in the annual report, and other forms of communication, both public domain and private information [and] information in any medium (financial, non-financial, quantitative, non-quantitative)" (Gray, Kouhy, & Lavers, 1995, p. 47).

As Mahoney, et al. (2013) put it, "Regardless of what they are titled, these reports all meet three criteria: a focus on social and environmental issues, distinction from the [organisation's] annual report, and content that is not prescribed by mandatory reporting requirements." (Mahoney, et al., 2013, p. 351). The definition provided by Ioannou and Serafeim is also a useful summary: "[an organisation]-issued general purpose non-financial report, providing information to investors, stakeholders (e.g., employees, customers and NGOs), and the general public about the [organisation's] activities around social, environmental and governance issues, either as a stand-alone report or as part of an integrated (e.g. financial and sustainability) report" (Ioannou & Serafeim, 2014, p. 2).

Thus, a sustainability report forms the basis for the communication to stakeholders of sustainability activities of an organisation, and organisations will adjust their reporting based on the identity and information needs of stakeholders (Herremans, Nazari, & Mahmoudian, 2016). This report and the reporting process can also aid organisations in formulating a strategy to work towards in their sustainability efforts, creating awareness of the need for change. This is possible because the sustainability

reporting process and the report itself should include the setting of sustainability objectives, engagement with stakeholders (both internal and external), setting targets, and finally reporting on how effectively the targets have been achieved (Adams & McNicholas, 2007; Searcy & Buslovich, 2014). However, Adams (2004) noted that sustainability reports often reflect actions to ensure the sustainability of the business, rather than the sustainability of the environment, and other areas that sustainability encompasses.

Several attempts have been made to introduce systems and guidelines to assist organisations to report on their sustainability practices in a structured way (Siew, 2015). In 1992 Kaplan and Norton introduced the notion of a 'balanced scorecard' to evaluate the practices of a business. The scorecard considers four aspects, namely the financial perspective, the customer perspective, the internal business perspective, and, finally, the innovation and learning perspective (Kaplan & Norton, 1995). In 1994 John Elkington coined the phrase 'triple bottom line' ('TBL') to refer to an organisation's need to report on its impact on the three Ps – people, planet and profit (Elkington, 2004). In 1997 the Global Reporting Initiative (GRI) was formed to promote the reporting of environmental issues. The GRI has since broadened its scope to include economic, environmental, and social issues, and in 2013 published its fourth sets of Sustainability Reporting Guidelines (G4) (Global Reporting Initiative, 2015b). In 2016 the GRI released a set of sustainability reporting standards, which developed the guidelines in G4 (Global Reporting Initiative, 2018). These standards are structured in a modular fashion, with three general standards, and a number of topic specific standards, allowing organisations to determine which standards are applicable to them, and apply only those. In addition, the US-based Sustainability Accounting Standards Board (SASB) was formed in 2011, and publishes industry-specific sustainability accounting standards (Sustainability Accounting Standards Board, 2018).

These guidelines, particularly the widely-used GRI guidelines (Marimon, Alonso-Almeida, Rodríguez, & Cortez Alejandro, 2012), provide information on how to report on sustainability activities and are designed to foster uniformity and comparability between reports from different companies. However Boiral and Henri (2017) find that the disclosures provided were not comparable, despite all using the same guidelines. This is because of the differences between organisations, but also partially due to the

difficulty of measuring sustainability activity. Furthermore, Ullman (1985) observes that organisations tend to underreport social activities because of the cost of reporting and the perception that activities more closely aligned with shareholders' interests should receive most of an organisation's funds. Social activities can also be over-reported by organisations to create a favourable impression and thereby increase their legitimacy.

The G4 guidelines define sustainability reporting thus: "Sustainability reporting helps organizations to set goals, measure performance, and manage change in order to make their operations more sustainable. A sustainability report conveys disclosures on an organization's impacts – be they positive or negative – on the environment, society and the economy. In doing so, sustainability reporting makes abstract issues tangible and concrete, thereby assisting in understanding and managing the effects of sustainability developments on the organization's activities and strategy" (Global Reporting Initiative, 2013, p. 3). They claim that the sustainability reporting process can lead organisations to address a wide range of economic, environmental and social issues. However they suggest that only those activities that are critical in enabling the organisation to achieve their strategic goals and manage their impact on society should be reported on (Global Reporting Initiative, 2013a).

2.2.3 Motivation for sustainability reporting

With the numerous sustainability reporting guidelines available the motivation of organisations to adopt these guidelines and prepare sustainability reports has become the subject of a large body of research.

Deegan (2002) summarises the motivations for organisations to provide environmental and social disclosures. These include, firstly, the need to comply with legal and regulatory requirements. Secondly there is the perception that there is economic benefit attached to being seen to undertake constructive social activities. Thirdly, some hold a belief that it is the right thing to do. Fourthly, they may want to legitimise the existence and operation of the organisation. Fifthly, they use these disclosures to manage various stakeholders. Finally, this may even be an effort to win reporting awards. Amini and Bienstock (2014) further identify the avoidance of

political costs and consequences as a positive outcome from engaging in and communicating sustainability activities.

Sustainability disclosures may be seen as a public relations tool, and used to improve the reputation and brand of the organisation, and thereby increase its legitimacy (Adams & McNicholas, 2007; Higgins & Walker, 2012). This is compounded by the fact that organisations that do not report on their sustainability practices face reputational risk because the global trend is to report on these issues (Maubane, Prinsloo, & Van Rooyen, 2014). In addition, some organisations form relationships with stakeholders such as NGOs with the apparent purpose of increasing their legitimacy. Where the joint activities that result from these relationships are unrelated to the core operations of the organisation it suggests that the motivation is purely related to increasing legitimacy (Joensuu, Koskela, & Onkila, 2015).

The attitude of seeking legitimacy can be in conflict with the notion of accountability to stakeholders. This happens if organisations choose which disclosures to present, rather than provide information to 'those who have a right-to-know' (Deegan, 2002). However Gray, et al. (1995) argues that stakeholder and legitimacy theory are two overlapping theories that explain corporate behaviour, particularly with regard to sustainability practices and reporting. Legitimacy theory refers to the needs of society as a whole, while stakeholder theory refers to stakeholder groups, acknowledging that each group has different needs and views, and degrees of power (Deegan, 2002). From the literature, it appears that legitimacy theory can explain the motivations of organisations to report on sustainability activities.

This is borne out by the studies of Deegan, et al. (2002) in their study of Australian organisations. They find that organisations increase their sustainability disclosures, particularly positive ones, after disasters such as oil spills or gas explosions. However, it was not as marked when these disasters did not receive significant media coverage. These findings are consistent with legitimacy theory, which states that organisations are required to provide the public with reasons for their continued existence and operations when there is a threat to their legitimacy. This strengthens the argument for mandatory sustainability disclosures, to allow stakeholders access

to information regarding an organisation's activities at all times, and not just when management believes that the legitimacy of the business is at threat.

Laws and regulations have also been found to be motivators. Organisations in countries that have legal environmental and social reporting requirements such as France, tend to report. However, the reporting quality tends to be poor, and are an effort to be legitimised, rather than to be transparent (Chauvey, Giordano-Spring, Cho, & Patten, 2015).

In a study of the motivations of Canadian organisations for issuing standalone voluntary sustainability reports Thorne, et al. (2014) find that size was significant, with larger organisations being more inclined to issue a standalone report. However, the profitability and actual levels of sustainability activities did not determine the issuing of standalone reports. Organisations were using standalone reports to communicate sustainability policies to stakeholders, in an attempt to increase legitimacy, regardless of the degree of activity. Those organisations surveyed who did not issue a separate sustainability report indicated that their motivations for not doing so were because there was no pressure from stakeholders or regulators. They confirmed that if such pressure should arise they would prepare reports.

De Villiers and van Staden (2006) find that organisations in South Africa provide detailed environmental disclosures but over time make more general and fewer specific environmental disclosures. The authors surmised that organisations find general disclosures less threatening to the legitimacy of the organisation. They examine organisations in the mining and industrials sectors and find that mines disclose more. They conclude that in industries that are characterised as having a greater environmental impact it is perceived as less damaging to give general disclosures, thereby 'ticking the box' of providing disclosure, with minimal impact on the perceived legitimacy of the organisation. Dube and Maroun (2017) find a similar trend in the sustainability reporting of platinum mining companies following the Marikana massacre in 2012. Linking this to the phases of legitimacy of Ashforth and Gibbs (1990) and Hearit (1995) this shows that organisations will make more social and environmental disclosures as they are establishing or expanding their legitimacy, but will reduce these disclosures when maintaining their legitimacy.

Kolk (2010) summarises the motivations for multinational organisations to report on their sustainability efforts. These are presented in Table 2. These include the facilitation of implementing strategies relating to the environment and society, and the ability to track progress against those stated strategies. A further key reason relates to enhanced communication and stakeholder relationships. Conversely, some organisations choose not to report on sustainability activities because of a lack of expectation from their industry and stakeholders, and doubts relating to reporting costs and benefits.

Reasons for reporting	Reasons for non-reporting
<ul style="list-style-type: none"> • Enhanced ability to track progress against specific targets • Facilitating the implementation of the environmental strategy • Greater awareness of broad environmental issues throughout the organisation • Ability to clearly convey the corporate message internally and externally • Improved all round credibility from greater transparency • Ability to communicate efforts and standards • License to operate and campaign • Reputational benefits, cost savings identification, increased efficiency, enhanced business development opportunities and enhanced staff morale 	<ul style="list-style-type: none"> • Doubts about the advantages it would bring to the organisation • Competitors are not publishing reports • Customers (and the general public) are not interested in it, it will not increase sales • The organisation already has a good reputation for its environmental performance • There are many other ways of communicating about environmental issues • It is too expensive • It is difficult to gather consistent data from all operations and to select correct indicators • It could damage the reputation of the organisation, have legal implications or wake up 'sleeping dogs' (such as environmental organisations)

Table 2 Motivations for reporting or non-reporting of sustainability issues (Kolk, 2010)

2.2.4 Adoption of sustainability reporting

Prior to the introduction of initiatives such as the Global Reporting Initiative in 1997 there was little sustainability reporting guidance for those organisations that were motivated to do so. The result was variable sustainability reporting among organisations and years. However, reporting was sparse. A review of annual reports in the United Kingdom between 1979 and 1991 showed that only 10% of the pages in these reports was devoted to sustainability reporting (Gray, et al., 1995). Studies examining the largest global companies find that most prepare sustainability reports using the GRI guidelines (Barkemeyer, Preuss, & Lee, 2015; Diouf & Boiral, 2017).

The reporting landscape has changed dramatically in the more than 20 years since the research of Gray, et al. However, it is worth noting the trends they find in sustainability reporting. Firstly, they note that the reporting was not done systematically. This has been addressed with the introduction of global frameworks for reporting, such as the GRI. Secondly, they note that organisations did not experience immediate increases in profits, although there was evidence to suggest that there were lagged profits. This is borne out by the more recent research of Holliday, Schmidheiny, and Watts (2002), Post, et al. (2002) and Dixon-Fowler, et al. (2013). These studies find that the value of organisations increased over the long term when they engaged in sustainability reporting activities. Thirdly, Grey, et al. (1995) show that reporting varied according to the size of the organisation, and fourthly, that the industry played a role, although neither of these factors was conclusive. Fifthly, the country in which the organisation was based, and the country of the parent organisation, influenced reporting. Finally, they find that there is a positive relationship between the quality of social responsibility reporting and the institutional factors of the capital intensity and the age of the organisation, and the attitudes of senior management and the existence of a social responsibility committee (Gray, et al., 1995).

More recently, in similar research to Gray, et al. (1995), Marimon, et al. (2012) note that the GRI guidelines were the most widely adopted sustainability standards. This was despite there being more than 300 standards on sustainability reporting at that stage, such as those of the United Nations and the Organisation for Economic Co-operation and Development. The adoption of the GRI reporting standards was found

to be greater in industries which affected either the environment or society more, or for organisations which had higher capital requirements. The standards were adopted more readily by industries such as financial services, energy and energy utilities, food and beverage products, mining, construction and telecommunications, with financial services far exceeding other industries in standards uptake (Marimon, et al., 2012).

Industry type is again found to be significant in a study of sustainability reporting patterns of companies on the JSE SRI Index. In this study, Maubane, et al. (2014) find that there are differences in the focus of sustainability reporting depending on the industry. The mining industry report more extensively on environmental and social issues, but less on governance. The first two findings are expected, but the lack of governance reporting (over the categories of board practices, ethics, indirect impact of business operations, business values and risk management, and broader economic issues) is surprising because of the high impact nature of the industry. Further, the retail industry is found to report environmental impact weakly, while the banking industry report less on their societal impact. The retail industry, financial services (other than banks) organisations, and the telecommunications industry are shown to reporting weakly on their social activities.

Organisations are more likely to report on their social responsibility practices where there is a need to increase legitimacy, related to the nature of their operations (Kilian & Hennigs, 2014), and where there is pressure exerted by government and society. Industry type is also influential when there is a shift in the balance between the perceived costs and benefits of such reporting (Adams & McNicholas, 2007).

Ioannou and Serafeim (2014) confirm the findings of Gray, et al. relating to the country base of organisations. They examine the effect of laws and regulations on corporate behaviour and find that mandatory reporting requirements increase sustainability practices and prioritisation of sustainability activities. A number of countries, including Australia, China, Finland, France and the United Kingdom, have implemented laws making sustainability reporting mandatory. Enforcement of laws and regulations, and the existence of external assurance was found to be significant for the amount of change in organisations. These results were consistent for developed and developing countries. However, organisations in developing countries

changed their sustainability practices less, with the exceptions of sustainable development focus and ethical practices within organisations, which were stronger in developing countries.

These studies confirm that a number of factors contribute to the adoption of sustainability reporting, and these vary by geographical location. However, the industry classification and size of the entity consistently show a relationship to the sustainability reporting witnessed.

2.2.5 Factors limiting the adoption of sustainability reporting

Certain factors prevent adoption, or limit the extent to which an organisation adopts sustainability reporting. Adams and McNicholas (2007) conducted an action research project in an Australian organisation that was seeking to improve its sustainability reporting. They conclude that several factors slowed the development of sustainability reporting in this organisation. These include, firstly, lack of experience and knowledge among managers concerning best practice in sustainability reporting. Secondly managers showed a lack of understanding of how sustainability goals and reporting could be integrated across the organisation. Thirdly, in the organisation there was a lack of experience in engaging with stakeholders and identifying relevant KPIs. Finally, reporting was hampered by managers' inability to choose among available reporting guidelines.

The factors that ultimately assisted their case study organisation to develop sustainability reporting practices were the leadership provided by both the owner of the organisation and the CEO, the commitment shown by the team compiling the sustainability report, the guidelines provided by external bodies for sustainability reporting, similar to the GRI, and, finally, the competition from other organisations within the industry with their sustainability reporting (Adams & McNicholas, 2007).

This study also identifies that a lack of time and resources are factors that prevent managers in an organisation from adequately reporting on their sustainability practices. It can be concluded therefore that an organisation requires leadership buy-in and external guidelines to successfully implement sustainability reporting. In

addition, industry players can play an important role in determining industry standards in reporting (Adams & McNicholas, 2007).

Expanding on these findings, a study of Canadian organisations also finds that the collection of data, selecting appropriate content and finding the correct balance in the report were challenges in the reporting process (Searcy & Buslovich, 2014).

2.2.6 Factors affecting the extent of sustainability reporting

Despite the limitations identified, there has been an increase in sustainability reporting, although the extent of reporting has varied. A number of factors that drive this emerge from the literature. Roberts (1992) suggests that the age, industry type and organisation size all affect the extent of sustainability reporting of organisations.

The age of the organisation is a relevant factor because as an organisation matures the public expects a greater degree of social involvement, and past practices set a precedent for future activities (Roberts, 1992).

Roberts (1992) further finds that the industry type does affect the extent of disclosure. This is due to industry characteristics such as competition and consumer visibility, as well as the amount of regulation of the industry. He concludes that organisations in high impact industries disclose more information.

The final influencing characteristic suggested by Roberts (1992) is the size of the organisation, because larger organisations are more visible to the general public and special interest groups. Frías-Aceituno, Rodríguez-Ariza and García-Sánchez (2013) add that large organisations generally have a more diverse product range, and a larger distribution network, and also make greater use of capital markets for financing. Although Roberts finds no significant relationship between the size of an organisation and the extent of sustainability disclosure, Frías-Aceituno et al. (2013) find a positive correlation between these two variables.

In order to better understand the different extent of reporting observed, Adams (2002) categorises the factors affecting disclosure into corporate characteristics, general factors, and internal context. The corporate characteristics include

organisation size and industry type, financial or economic performance, the volume of share trading, and the price and related risk of its shares. General factors include base country, time period, specific events, and pressure from stakeholders. The internal context includes the existence of a sustainability reporting committee, personality of the organisation chair, internal reporting processes, and management's attitude to sustainability reporting.

A study of Thai companies finds that economic performance, and age of the company did not affect the extent of disclosures. However company size and government ownership were shown to increase the extent of sustainability disclosures (Wuttichindanon, 2017). In a study of high-polluting Canadian companies, the strategic oversight of the board of directors, the environmental management system used, negative media coverage, and the proportion of shareholders that are institutional investors increased the degree of environmental reporting (Nazari, Herremans, & Warsame, 2015).

A study of large European companies finds that companies with high share prices are likely to disclose more in sustainability reports, particularly in countries where there is extensive free market trading and access to information (de Villiers & Marques, 2016). This is consistent with the findings of Qiu, Shaukat and Tharyan (2016) that British companies with more social disclosures typically had a higher market value, which they attributed to the value that shareholders place on social disclosures, and the perceived future cash flows resulting from social investment. In addition, they find that past profitability was linked to more social disclosures, because of the companies' ability to expend resources on social investment. They find no relationship between environmental disclosures and either profitability or market value.

It is evident that there are a range of factors that affect that level of sustainability reporting by organisations. The size and industry classification are repeatedly seen to be relevant, while the findings relating to the age of the organisation are mixed. Furthermore, the involvement of management or shareholders is also a significant factor.

2.2.7 Reporting of 'bad news' relating to sustainability practices

The quality of reporting by organisations on ethical, environmental and social issues varies widely, specifically the comprehensiveness of reports (Adams, 2002). Adams later concludes (2004) that this is due in part to a lack of completeness in the reporting of 'bad news' relating to the operations of an organisation. These findings are confirmed by Diouf and Boiral more recently (2017). The danger in this lack of completeness is that it leaves the impression that an organisation is doing well, and possibly even attempting to improve, while this is not the case.

Furthermore, Hahn and Lulfs (2013) argue that organisations tend to withhold negative information to avoid negative market perceptions of the organisation, and sustainability reports may not increase accountability, or give a true reflection of the sustainability activities of an organisation. However, they assert that this corporate behaviour can endanger the very legitimacy the organisation seeks to maintain, because the markets will perceive that information is being withheld. Conversely, if organisations choose to voluntarily disclose negative information about their activities, this transparency can create the public perception that the organisation is proactively addressing these problems, and future risk is reduced. Positive information published by an organisation can also be perceived to be untrustworthy, while negative information is perceived as more trustworthy.

Organisations therefore tend to strategically increase the voluntary disclosure of sustainability issues when major events affect the organisation or industry, or in response to social pressure. This supports the view that organisations use these disclosures to increase their legitimacy (Deegan et al., 2002; Dube & Maroun, 2017). This was borne out by the research of Tilling and Tilt (2010) on the voluntary social and environmental disclosures in the annual reports of a tobacco company over 43 years. They concluded that these disclosures increased in response to perceived or actual threats to the legitimacy of the organisation.

Hahn and Lulfs (2013) identify six strategies for dealing with negative sustainability disclosures that they observe in their study of the sustainability reports of 40 American and German organisations. These are:

1. Marginalisation – organisations imply that the incident or information is irrelevant or unimportant
2. Abstraction – organisations generalise the incident or information as being prevalent throughout the industry, rather than specific to the organisation
3. Indicating facts – merely mentioning the negative incident or information, with no further commentary or explanations
4. Rationalisation – emphasising either the positive ramifications of the incident, or implying that the incident is a normal part of business practice
5. Authorisation – referencing an external benchmark or authority that is seen to vindicate the negative aspects, allowing the external party to effectively take responsibility for the actions taken by the organisation
6. Corrective action – organisations take corrective action, although the disclosure itself could be imprecise

Apart from corrective action these strategies are symbolic, or evading responsibility and do not lead to a greater degree of legitimisation for an organisation. Only where an organisation has taken corrective action, and communicates this to stakeholders, is the legitimacy of the organisation increased by providing negative disclosures. They conclude by suggesting that organisations should describe and explain negative aspects in their sustainability reports, but should also go further to evaluate and explain consequences of negative events, in order to restore the legitimacy of the organisation (Hahn & Lülfs, 2014).

2.2.8 The credibility of sustainability activities and reporting

Because organisations withhold negative disclosures and emphasise the positive, sustainability reporting is seen as a public relations tool by many critics (Cerin, 2002). This view is supported by Font, et al. (2012) who find that organisations publicise their philanthropic gestures widely. In addition, they tend to report on 'soft' matters, rather than 'hard' matters which can be externally measured and verified (Ong, Trireksani, & Djajadikerta, 2016). Organisations also use impression management techniques when they present sustainability information, in the writing styles employed (Sandberg & Holmlund, 2015), and particularly in the CEO statements issued (Barkemeyer, Comyns, Figge, & Napolitano, 2014).

Organisations tend to be selective in choosing their areas of sustainability performance. If there are economic concerns within the organisation social and environmental activities are minimised (Tregidga et al., 2014). Where a conflict of interest arises between the interests of shareholders and other stakeholders, the management of an organisation will invariably favour the interests of the shareholders (Jones, 1999).

Furthermore, organisations often use sustainability reporting strategically, as a signalling tool and in order to manage their legitimacy. Organisations 'engage in organised hypocrisy', by creating various façades, such as a rational, progressive or reputation façade, but these façades are not a true reflection of the policies or actions of the organisations (Cho, Laine, Roberts, & Rodrigue, 2015).

However, sustainability reporting which is aspirational can be a positive form of motivation for real change in organisations, even if it reflects a better performance than the organisation currently exhibits (Christensen, Morsing, & Thyssen, 2013).

Marquis, et al. (2016) find that organisations with greater environmental impact in fact did not exhibit selective disclosure practices, which they hypothesised was due to the increased public scrutiny of their operations.

Wang, et al. (2018) examine sustainability reports in the United States, and find that where companies had positive social and environmental practices their reports were written in clearer language. Where companies performed poorly they reported with highly complicated and technical language, in order to obscure their performance. This is similar to the findings of Melloni, et al. (2017) who examine the integrated reports of a number of early adopters of <IR>, and Nazari, Hrazdil and Mahmoudian (2017) who examine the stand-alone sustainability reports of large US organisations.

Font, et al. conducted a study of ten international hotel groups, to measure the validity of sustainability activities and reporting. They find that the larger hotel groups tended to have a wider gap between their reported social responsibility activities and their actual performance, while smaller hotel groups had a smaller disclosure-performance gap. They emphasised the importance of assurance to help prevent green-washing by organisations (Font, et al., 2012).

Internal auditors can perform an important function in providing this assurance relating to sustainability activities (Nickell & Roberts, 2013). However, a growing number of organisations are making use of external assurance relating to their sustainability reporting, indicating the need to validate such reports to increase their legitimacy (O'Dwyer, Owen, & Unerman, 2011).

Thus, organisations that voluntarily produce sustainability reports, and include both positive and negative disclosures, and whose reports are assured, increase their credibility. In contrast, those organisations that are forced by regulation to report have diminished credibility (Lock & Seele, 2016).

2.2.9 Summary

Reporting of sustainability practices takes many forms, including stand-alone sustainability reports, disclosures within annual reports, and other communication with stakeholders. Reporting standards, such as the guidelines published by the Global Reporting Initiative, have aided organisations in their preparation and issuing of sustainability reports. Larger organisations, and those that are more mature, are more likely to issue sustainability reports, and there is more adoption in countries where such reporting is mandatory. However, many organisations do not report on their sustainability because of a lack of perceived importance and benefits related to the costs.

A key motivation for implementing sustainability practices and reporting is a desire to increase the legitimacy of the organisation. This is particularly true when organisations are establishing, extending or defending their legitimacy, where an increase in sustainability disclosures is frequently witnessed. Organisations' sustainability reporting practices can either increase or damage their legitimacy, especially regarding their reporting of 'bad news', and whether their sustainability reporting is perceived to be credible, or simply green-washing.

The introduction of integrated reporting introduces a new element in the way sustainability information can be communicated to stakeholders. The following

section will examine the concept of integrated reporting and explore the relationship between integrated reporting and sustainability reporting.

2.3 Integrated Reporting

Integrated reporting (<IR>) is a recent development in corporate reporting. The International <IR> Framework ('The Framework') was published in December 2013 by the International Integrated Reporting Council ('the IIRC') following a period of development and consultation.

This section will discuss the development and influences of <IR> and the need for this form of reporting. The characteristics of <IR>, as opposed to traditional forms of corporate reporting, the benefits, and the trends observed in the adoption of <IR> will then be discussed.

2.3.1 Development of integrated reporting

The origins of <IR> can be traced back to various initiatives over the last few decades, with the emergence of the balanced scorecard in the early 1990's (Kaplan & Norton, 1995), Elkington's 'Triple Bottom Line' in 1994 (Elkington, 2004) and the Sustainability Reporting Guidelines of the Global Reporting Initiative from the initial version in 2000 to the G4 guidelines issued in 2013 (Global Reporting Initiative, 2015b). These measures have evidenced the increasing global awareness of the need for a broader corporate reporting focus than merely the financial interests of the shareholders (Perrini & Tencati, 2006).

As the next step in the journey, in 2004 the Prince of Wales established the Accounting for Sustainability project ('A4S') with the aim "to help ensure that sustainability – considering what we do not only in terms of ourselves and today, but also of others and tomorrow – is not just talked and worried about, but becomes embedded in organizations' 'DNA'" (HRH The Prince of Wales, 2015). The A4S developed the first reporting framework in 2007 that provided guidance on how an organisation should present its performance in an integrated way, by reflecting on its management and strategy. This framework was generally well received, and in 2010

the project, in collaboration with the GRI and the International Federation of Accountants (‘IFAC’), established the IIRC, with the mandate to develop and promote an integrated and connected approach to corporate reporting (Accounting for Sustainability Project, 2014). Despite the role of the GRI in the development of <IR>, Fasan (2013) notes that <IR> should be seen as an evolution of the annual report, rather than of the sustainability report. This is because the Framework identifies the intended audience of integrated reports to be the providers of capital - the investors and lenders, rather than all stakeholders, although all stakeholders are benefitted by the information provided. This is in contrast to sustainability reports which have all stakeholders as the intended audience (Global Reporting Initiative, 2013a)

South Africa was at the forefront of the development and implementation of <IR>. The King III Report on Governance for South Africa (Institute of Directors of Southern Africa, 2009) introduced the recommendation that organisations report in an integrated way, and in 2011 the Integrated Reporting Committee of South Africa released a discussion paper, *Framework for Integrated Reporting and the Integrated Report* (Integrated Reporting Committee of South Africa, 2011). Shortly thereafter the IIRC released their guide on integrated reporting, and South African organisations were encouraged to follow the international guidelines.

The IIRC released their first discussion paper, entitled *Towards integrated reporting: Communicating value in the 21st Century*, in 2011, outlining the need for <IR>, and the proposed guidelines (International Integrated Reporting Council, 2011). An exposure draft of the Framework was released in 2012, before the final International <IR> Framework was published in December 2013 (International Integrated Reporting Council, 2014). The Framework was prepared for the use of entities in the private sector, although it notes that it can be applied, and adapted, for the use of entities in the public sector and also non-profit organisations (International Integrated Reporting Council, 2013).

Following five years of South African companies producing integrated reports, King IV was released in 2016, which further advocated integrated thinking and integrated reporting. King IV used the concepts and principles included in the International <IR> Framework, and the principles are therefore consistent between the two reports. The report refers to the triple context in which organisations operate, being their

economic, societal and environmental context, and also refers to the six capitals model identified in the <IR> Framework. The report also explicitly identifies legitimacy of an organisation as a desired outcome of good corporate governance, including integrated planning and reporting (Institute of Directors of Southern Africa, 2016).

2.3.2 The need for integrated reporting

One significant reason that integrated reporting came into being was because organisations producing separate financial and sustainability reports were unable to effectively use either form of reporting because of their complex and conflicting reporting requirements (Frías-Aceituno, et al., 2013). In addition, the information provided did not meet the information needs of a broadening group of stakeholders who expected information (Busco, Frigo, Quattrone, & Riccaboni, 2013). Users of financial reports wanted a bigger picture of the activities of organisations, and found a large amount of their information about the organisation outside the annual report (Monterio, 2015). <IR> provides for these separate forms of reporting, financial and sustainability, to be integrated into one cohesive whole, which will allow businesses to concentrate their efforts in an effective way.

A number of scholars raised concerns about the effectiveness of the existing reporting structures prior to the introduction of <IR> in meeting the needs of the organisation and society.

Examining financial reporting, Saravanamuthu (2004) discusses the impact that the international harmonisation of accounting standards had on business practice, and particularly on sustainability in the broadest sense. She argues that accounting standards were introduced to allow organisations to effectively manage their communication with shareholders and creditors, but with little reference to the needs of other stakeholders. Intrinsic to the definition of an asset, in terms of The Conceptual Framework for Financial Reporting (International Accounting Standards Board, 2010) is the concept of control of a resource by an organisation. Saravanamuthu argues that this emphasis on control, and usually legal ownership, removes the responsibility of organisations to the wider community. She argues that the focus on shareholders, and maximising the return to this narrow group of stakeholders, influences managers to minimise efforts concerning environmental and

social responsibilities, because the associated costs damage the profit generated. She concludes with a call for accounting to broaden its priorities, to include environmental and social concerns with an equal weighting to the financial interests of shareholders.

In 2001 Owen, et al. note that offerings in terms of sustainability reporting were insufficient to address the needs of a wide body of stakeholders, and further developments were required (Owen, et al., 2001). Sustainability reporting is viewed with scepticism by many critics, labelling it largely a public relations exercise, and an additional arena for organisations to compete against each other. This combination of motives results in sustainability reporting being largely done in the self-interest of the organisation. The information provided is therefore often not appropriate to meet the needs of the stakeholders for which it was intended in terms of its content, and delivery (Cerin, 2002).

The introduction of <IR>, and the G4 guidelines of the GRI, go some way to addressing the concerns raised by these scholars, by having organisations considering a wider range of stakeholders, and all capitals (International Integrated Reporting Council, 2013) and focusing on sustainability issues that are material to the operations of their organisation (Global Reporting Initiative, 2013a) in their reporting.

Eccles and Serafaim (2011) identify four factors that account for the current global sense of urgency for organisations to be undertaking <IR> and, as a natural consequence, integrated thinking. Their view is that this will ensure a sustainable society. The factors identified are: (1) the recurring financial crises witnessed globally, (2) an increasing awareness by individuals and organisations of the effects of climate change, as well as an awareness of the limitations of natural resource, such as water and certain minerals, (3) the growing recognition of the importance of human capital in order to create value in developed economies, as well as a recognition of the importance of human rights in developing countries, and (4) the recognition of the essential role played by good corporate governance and risk management in order to prevent major corporate disasters, such as through fraud, corruption, and major operating blunders. Abeysekera (2013) added that many investments in listed organisations are done by large investment funds, providing

retirement benefits for their clients. These ultimate investors have a long term view relating to their investments and are aware that entities that do not create value over the long term ultimately increase their costs in the form of taxes due to the damage done to the environment and society.

King IV identified a number of changes in the contexts in which organisations operate which have resulted in a need for enhanced corporate governance, including integrated thinking and reporting. The report identified the financial instability of preceding decades, climate change, technological advances and stakeholder activism as reasons for a needed change in how organisations operate and report (Institute of Directors of Southern Africa, 2016).

Integrated reporting therefore provides a single report that allows all stakeholders to assess the overall performance and value creation of an organisation (International Integrated Reporting Council, 2013).

2.3.3 Characteristics of integrated reporting

The International <IR> Framework of 2013 describes integrated reporting as a process of corporate reporting that promotes integrated thinking about an organisation. The resulting integrated report should be one that communicates how an organisation creates value. The integrated thinking and decision-making required to produce such a report should result in organisations being more efficient and productive in the allocation of their capital to create value in the short, medium and long term, and to make organisations more accountable and better at managing their capital (Busco et al., 2013). The capitals suggested by the Framework include financial, manufactured, intellectual, human, social and relationship, and natural capitals. An organisation uses these capitals as it interacts with its environment to create value. In order to truly create value, management of an organisation must maximise all of the capitals. If a single capital is emphasised, to the detriment of another, this is unlikely to maximise value in the long term (International Integrated Reporting Council, 2013).

The IIRC acknowledges that an organisation will have many stakeholders, including providers of capital, employees, customers, suppliers, business partners, local

communities, legislators, regulators, and policy-makers. Each group of stakeholders will have different needs and interests, as well as perceptions of how an organisation creates value. Integrated reports are aimed primarily at the providers of financial capital. However, integrated thinking allows an organisation to consider key stakeholders' needs and interests more fully, which is likely to result in a greater increase in value in the long term for all stakeholders (International Integrated Reporting Council, 2013). Previously, where information was reported relating to stakeholders other than the providers of financial capital, the information tended to be vague. But <IR> provides for more precise reporting of this information, in a meaningful way (Creelman & Boudreau, 2015). Relationships with an organisation's stakeholders are essential assets to manage, as they are the ultimate source of the organisation's wealth (Post, et al., 2002), and in the view of Eccles and Krzus (2010) <IR> will force organisations to embed the needs of stakeholders into their business strategies.

Integrated reports must be based on the guidelines and principles included in the Framework. This integrated report should reflect the integrated thinking and decision-making that integrated reporting seeks to promote. The primary purpose of an integrated report is to demonstrate and explain how an organisation creates value over time, with the primary audience being the providers of capital. However, the guidelines make it clear that the integrated report will benefit all stakeholders who have an interest in the organisation. It is also clear that the report should include both positive and negative matters in a balanced way (International Integrated Reporting Council, 2013). The integrated report therefore provides the vehicle called for by Perrini and Tencati (2006) which will allow organisations to report to and be held accountable by all of its stakeholders. In addition, if correctly implemented, integrated thinking and reporting support a combined 'outside-in' stakeholder and 'inside-out' management approach to sustainability accounting and reporting described by Burritt and Schaltegger (2010).

The Framework (International Integrated Reporting Council, 2013) provides several guiding principles that should be applied in preparing an integrated report. The principles of *Strategic focus and future orientation* and *Stakeholder relationships* echo the principles inherent in sustainability considerations. These create sustainable, long term organisations and for this a focus on stakeholder relationships

and holding organisations accountable for consideration of their needs is required. Of particular interest in this work are also those guiding principles of *Materiality* and *Reliability and Completeness*. The G4 Guidelines from the GRI (2013a) also include materiality as an important characteristic in sustainability reporting and in section 2.2.7 it was noted that organisations often tend to withhold negative information about sustainability practices, or to misrepresent them.

The Framework (International Integrated Reporting Council, 2013, p. 11) further states that "An integrated report therefore aims to provide insight about:

- The external environment that affects an organization
- The resources and the relationships used and affected by the organization, which are referred to collectively in this Framework as the capitals ...
- How the organization interacts with the external environment and the capitals to create value over the short, medium and long term."

An integrated report should therefore give disclosures on how the organisation is affected by and how it affects the environment and society, which make up the 'external environment'.

Despite the apparent commonalities between <IR> and sustainability reporting, the Framework does not refer specifically to sustainability, and the objectives of the two forms of reporting are not identical. Nevertheless, the Global Reporting Initiative views the integrated report as the link between financial and sustainability reporting. Ernst Ligteringen, who was the Chief Executive of the GRI when the <IR> Framework was released, recognised this when he stated that "Integrated reporting is a powerful lever to mainstream sustainability disclosure where it relates to [an organisation's] ability to create and sustain value" (Global Reporting Initiative, 2013b). However, Morrós Ribera (2016) raises concerns that focusing on value creation, and using the term 'capital' to refer to the resources an organisation has access to is suggestive of a financial focus. Thus, he suggests the Framework reduces the accountability of organisations, and decreases the broader reach that sustainability reporting achieved, by giving primary attention to financial stakeholders.

However, Ligteringen discusses how investors are beginning to understand that organisations should incorporate all of the capitals in their strategic priorities. In this way <IR> can bring the interests of the providers of financial capital more closely in

line with those of other stakeholders, by presenting a more complete picture of an organisation and helping it to articulate the interrelationships between the various capitals (Global Reporting Initiative, 2013b).

During the period of this study JSE-listed companies in South Africa were required to comply with the King Code of Governance Principles and the King Report on Governance ('King III') (Johannesburg Stock Exchange Limited, 2013)³ which recommends that organisations prepare an integrated report. The recommendations of King III are largely in line with the requirements of the Framework, although King III was published in 2009, four years prior to the Framework. King III emphasises that the board of directors holds the ultimate responsibility for quality of the integrated reporting, and that adequate controls must be put in place to ensure the integrity of such reports. In addition, it states that "a formal process of assurance with regard to sustainability reporting should be established", in addition to the assurance obtained over financial information (Institute of Directors of Southern Africa, 2009). This places an additional burden on the board of directors, but should improve the quality of the integrated report (Institute of Directors of Southern Africa, 2009). This was supported by the findings of Ahmed Haji and Anifowose in their study of South African companies from 2011 to 2013. They find that the effectiveness of the audit committee has a positive influence on the quality of integrated reporting (2016a). King III and the Framework will be compared in section 2.4.1.

2.3.4 Benefits of integrated reporting

As noted above, the integrated report benefits all stakeholders, because it presents information about the activities of an organisation in an integrated way. These benefits are expected to be short, medium and long term benefits according to a group of surveyed directors (South African Institute of Chartered Accountants, 2015).

Eccles and Saltzman (2011) class the benefits of <IR> to the organisation into three categories, internal benefits, external market benefits, and managing regulatory risk.

³ Following the release of King IV in 2016, organisations are now required to comply with the new code.

Internal benefits include better decision-making around the allocation of resources, enhanced engagement with shareholders and other stakeholders, and lower reputational risk. Eccles and Serafaim (2011) highlight additional benefits to the organisation, which are echoed by Burke and Clark (2016). These include an improved understanding by the organisation of the relationships between its financial and non-financial performance, which leads to better systems of internal control and measurement.

External market benefits include meeting the increasing demand for non-financial information by investors, and controlling the non-financial information that is available, which can be published by data vendors such as Bloomberg. In addition, organisations are more likely to be included on sustainability indices if they publish the relevant information (Burke & Clark, 2016; Eccles & Serafeim, 2011). Integrated reports increase investors belief in the credibility and legitimacy of organisations (Atkins & Maroun, 2015). In line with this finding, Zhou, et al. (2017) find that analysts had less errors in their projections of future earnings of companies that conformed to the <IR> guidelines most closely. The cost of equity capital for these companies was also lower, confirming the findings of Dhaliwal, Li, Tsang and Yang (2014).

Another benefit recorded by Eccles and Saltzman (2011) relates to the ability of organisations to meet the increased burden of information required by regulators. Ioannou and Serafeim (2014), note that governments in an increasing number of countries have imposed mandatory disclosure laws and regulations relating to sustainability reporting. They concluded their research, however, with findings that organisations operating in these countries show a higher level of socially responsible managerial practices.

Although the benefits identified by Eccles and Saltzman (2011) relate primarily to the organisation, external stakeholders may also benefit. Abeysekera (2013) identifies three categories of stakeholders, namely economic, social and political. Economic stakeholders comprise an organisation's customers and suppliers, as well as lenders and shareholders. Social stakeholders are staff and the communities in which an organisation operates, and political stakeholders are regulators and government. These stakeholder groups are beneficiaries of the benefits identified above by Eccles and Saltzman (2011).

An additional benefit of integrated reporting, as outlined by King III, is that by presenting the goals and strategies of the organisation concerning all of the capitals, the organisation will see greater buy-in and support of the objectives of the organisation by stakeholders, because they can understand how these align with their own interests and expectations (Institute of Directors of Southern Africa, 2009). Kaya & Türegün (2014) show that investors and customers reward sustainable behaviour by investing in or buying from an organisation that exhibits this behaviour. By communicating these behaviours in an integrated report, an organisation can harness this loyalty.

The <IR> Framework provides guidelines that can help address management's lack of experience and knowledge of integrated reporting by providing guidelines for organisations in their reporting and internal integrated planning processes. The Framework also provides a single framework that organisations can apply in developing their integrated reports.

An overarching benefit of <IR> is the shift in thinking from short-term, profit-driven decision-making, to one where the short, medium and long term consequences of decisions are considered (International Integrated Reporting Council, 2013). A profit- or share-price driven perspective can lead to an organisation making decisions based on what it perceives the market to expect, rather than what is in the best long term interest of the organisation and its stakeholders (Fuller & Jensen, 2002). Such short-sighted focus was part of the cause of the global financial crisis of 2008-2009 (United Nations Principles for Responsible Investment, 2009). A change of focus should result in organisations that are more sustainable in the long term.

2.3.5 Adoption of integrated reporting

The adoption of integrated reporting was initially slow but has gathered momentum in recent years. Over 1 500 organisations worldwide now publish integrated reports and investors globally are beginning to gain an understanding and appreciation for integrated reports and the benefits they offer (International Integrated Reporting Council, 2018). However, Eccles and Serafeim (2011) claim that investors are generally indifferent to integrated or sustainability reporting. In addition, accountants

who are involved in the leadership of organisations, and the preparation of their reporting, are typically narrowly focussed on financial information (Adams, 2017). Eccles and Serafeim suggest that, despite the challenges, organisations in countries where integrated reporting is not mandated should voluntarily adopt the Framework, because of the numerous benefits. They encourage corporate investors to put pressure on organisations to adopt <IR>. Stent and Dowler (2015) note that in countries where the adoption of <IR> is voluntary, their adoption has been slower. This confirms the assertion by Eccles and Serafeim (2011) regarding the indifference of investors, and why they conclude that regulation is important to speed the uptake of <IR>. They noted that regulation can take the form of legislation, regulatory actions or listing requirements.

Where organisations do voluntarily adopt <IR> their motivations include the desire to remove the inefficiencies of producing separate annual and sustainability reports, to remove the silos within the business, and to encourage integrated thinking, and to provide stakeholders with a single report that includes all relevant information about the value creation and performance of the organisation. For those organisations which were already integrating sustainability thinking into their business strategies, the integrated report provides a vehicle to express this strategy (Global Reporting Initiative, 2013c).

Legitimacy was identified as a strong motivator for sustainability reporting (refer to section 2.2.3), but the motivating link between integrated reporting and legitimacy has been unclear in the literature. Lai, Melloni and Stacchezzini (2016) find that, unlike sustainability reporting, early <IR> adopting organisations were not seeking to increase their legitimacy. This is in contrast to Beck, Dumay, & Frost whose study in Australia finds that organisations adopting <IR> typically do so in order to enhance their legitimacy, and are organisations that previously adopted sustainability reporting (2017).

García-Sánchez, et al. (2013) state that <IR> is more likely to be adopted in countries where citizens think of their actions as part of a group, and where the focus is on quality of life, rather than on material success. These qualities are in line with the aims of <IR>, and this result would be expected. A further study finds that the voluntary adoption rate was higher in countries that had a strong tradition of good

corporate governance and non-financial disclosures, such as Brazil and the Netherlands. In contrast, countries such as the United States and the United Kingdom, where reporting in the past has focussed on financial stakeholders, have seen a lower adoption rate (Rivera-Arrubla, Zorio-Grima, & García-Benau, 2017).

In a study of 1 590 international companies Frias-Aceituno, et al. (2014) show that voluntary adoption of <IR> will depend on the organisation's size, its profitability (with larger, more profitable organisations more likely to use <IR>), as well as the size of the industry (with monopolies less likely to adopt <IR>). The size of the organisation is significant because of the increased usage of external funds, and the associated increase in the number of stakeholders. By providing integrated information, organisations can reduce the conflicts between stakeholder groups, such as shareholders and creditors. In their study the industry and growth prospects were not found to influence adoption of integrated reporting. Voluntary adoption of <IR> also depends on the structure of the board of directors, and their involvement in the reporting process, whether the sustainability disclosures are assured or not, and an organisation's sustainability performance rating (Adams, 2017; Lai et al., 2016).

Organisations need strong leadership to successfully implement <IR> as well as the assistance of external guidelines (Adams & McNicholas, 2007). Senior managers are increasingly aware of sustainability issues in their organisations, and in private meetings with investors the reporting is shifting from purely financial, to a more integrated approach, resulting in private integrated reporting (Atkins, Solomon, Norton, & Joseph, 2015)

In South Africa <IR> has been mandatory for listed organisations on an "apply or explain" basis since 2011. This has meant a much higher adoption rate than the rest of the world, although the quality of integrated reports has varied widely, with many not meeting the requirements of an integrated report, despite claiming to (Ernst & Young, 2012; EY, 2013; Miller & Graham, 2013; Rivera-Arrubla, et al., 2017). Furthermore, it was found that although the companies adopting <IR> in South Africa were using the language and terms of the Framework, the substance of their reports had not changed from previous reports (Ahmed Haji & Hossain, 2016). Their adoption of <IR> was therefore largely ceremonial, and an attempt to secure unfounded legitimacy for the organisations (Ahmed Haji & Anifowose, 2016b).

Therefore, although <IR> is designed to encourage integrated thinking within an organisation, this has not always been achieved. This is because many organisations focus on the data for the report, and do not change their thinking in any way to incorporate the broader issues that need to be addressed. It is possible for the scope of information required by the integrated report to prompt real change, but it is not guaranteed. Thus, where organisations are approaching preparation of the integrated report simply as a compliance exercise there is little evidence of integration (Van Zyl, 2013). There is also some ambiguity about the exact meaning of ‘integrated thinking’, although as time passes organisations are gaining a clearer understanding of these requirements (Feng, Cummings, & Tweedie, 2017).

The South African branch of PwC, a professional services organisation publishes an annual survey of integrated reports in South Africa, looking at the companies in the Top 40 of the JSE. In their 2013 survey (PwC, 2014) they highlight several themes in the way these companies engage with <IR>. Although the companies show a willingness to report in new and creative ways, such as the use of images and graphics, they also show a tendency to avoid reporting on actual board activities, and rather provide information such as the board charters and terms of reference. Companies also avoid describing their expectations for the future, and there is a discrepancy between the structure of the reports and the content (PwC, 2014).

The environment created in South Africa where all listed organisations are required to prepare Integrated Reports is conducive to better adoption and implementation (Stent & Dowler, 2015). The King IV report, released in 2016, changed the basis of application from the “apply or explain” guidance contained in King III to “apply and explain”⁴, and endorsed the International <IR> Framework, thus further promoting the adoption of integrated reporting by South African listed companies (Institute of Directors of Southern Africa, 2016).

⁴ King III only required organisation to provide an explanation where a principle of governance included in the code was not applied (Institute of Directors of Southern Africa, 2009). King IV requires organisations to provide explanations of their application of all of the principles, in order for the stakeholders to be able to evaluate the governance practices of the organisation (Institute of Directors of Southern Africa, 2016).

2.3.6 Summary

Integrated reporting has developed over the last decade in answer to calls by stakeholders for a change in the way organisations report on their activities, requiring organisations to integrate all aspects of their businesses, and focus on strategic and material issues. Organisations adopting <IR> enjoy numerous benefits, with the overarching benefit being a shift from profit-driven thinking and decision-making, to a longer-term, sustainable manner of thinking. <IR> has been adopted voluntarily by many organisations around the world, but in countries such as South Africa, where it is mandatory, the adoption rate has been higher.

There are certain similarities between <IR> and sustainability reporting, and in the following section the relationship and tensions between the two forms of reporting will be explored.

2.4 Integrated reporting and sustainability reporting

Integrated reporting and sustainability reporting initially appear to have a number of shared aims, and in its earliest form, <IR> had strong links to sustainability reporting. However, as the concept of <IR> developed it moved away from sustainability reporting. The differences will be discussed in this section, and suggestions will be made as to how these two forms of reporting can be used together.

2.4.1 The relationship between integrated reporting and sustainability reporting

With the development of <IR>, with its focus on all stakeholders, and the six capitals, which include human, social and relationship and natural capitals (International Integrated Reporting Council, 2013) the relationship between integrated reporting, and sustainability reporting appeared to be strengthened. The GRI considers the integrated report to be the link between corporate reporting and sustainability reporting, with “Integrated reporting and Sustainability Reporting play[ing] a vital and complimentary role” (Global Reporting Initiative, 2013b).

However, the focuses of sustainability reporting and <IR> are different, with sustainability reporting aiming to increase sustainability, while integrated reporting seeks to incorporate sustainability reporting “only insofar as it creates value for organisations” (Tweedie & Martinov-Bennie, 2015).

When the GRI issued the G4 reporting guidelines in May 2013, they recognised that sustainability reporting can be done with stand-alone sustainability reports, within integrated reports, or in other forms of corporate communication. They promoted the integration of strategic sustainability-related information with financial information because of the increasing importance of sustainability to the long term existence and success of organisations (Global Reporting Initiative, 2013a).

However, after the release of the <IR> Framework in 2013 (International Integrated Reporting Council, 2013) the original expectation that <IR> would integrate financial and sustainability reporting were unmet, with the Framework giving priority to the financial stakeholders and not really covering their sustainability performance except where it affects providers of finance (McElroy, 2014).

This sentiment is echoed by Flower (2015), Thomson (2015) and Tweedie and Martinov-Bennie (2015) who argue that, with the release of its Framework, the IIRC has advanced the case for sustainable businesses, but not for a sustainable society. Flower goes so far as to state that he believes the IIRC had been ‘captured’ by the accounting profession. However, Tweedie and Martinov-Bennie acknowledge that by having organisations reporting in an integrated fashion sustainability issues are brought into the main-stream of society. They state that a strategic trade-off may be necessary, between greater acceptance of sustainability goals and less application than strictly envisaged by bodies such as the GRI.

In response to these assertions, Adams (2015b) outlined the ways in which many organisations include the principles contained in the <IR> Framework within their sustainability reporting, such as disclosing their strategy, risks and business model. These organisations are choosing to do so either within their stand-alone sustainability reports or within their integrated reports. This is done at additional cost to the organisations, and therefore will only be done if they perceive a benefit from adopting these practices.

Although the <IR> Framework does not mention sustainability directly, the IIRC addressed these concerns by releasing their Corporate Reporting Dialogue Landscape Map in 2015. The Corporate Reporting Dialogue ('CRD') was a project to assist preparers and users of corporate reports to understand and apply the requirements of various reporting initiatives, with particular reference to how each of these frameworks relates to <IR> (Global Reporting Initiative, 2015a). The Landscape Map demonstrates how each of the reporting initiatives meets the requirements of <IR>, in terms of the purpose of each initiative, its scope and the content guidance it provides. The CRD partners include the two significant global financial reporting standards bodies, the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board ('FASB'). Other partners are entities which have issued sustainability reporting guidelines, including the Global Reporting Initiative. Table 3 summarises these partners, and how the scope of their reporting guidelines provides coverage of the six capitals of <IR> (International Integrated Reporting Council, 2015).

Initiative	Financial Capital	Manufactured Capital	Intellectual Capital	Human Capital	Social and relationship Capital	Natural Capital
CDP's Information Requests						Full
CDSB Framework for reporting environmental information and natural capital						Full
FASB Accounting Standards	Full	Partial	Partial	Partial		Partial
GRI G4 Sustainability Reporting Guidelines and G4 Sector Disclosures				Full	Full	Full
International Financial Reporting Standards	Full	Partial	Partial	Partial		Partial
ISO 26000 – Social responsibility			Partial	Full	Full	Full
Sustainability Accounting Standards				Full	Full	Full

Table 3 Scope of corporate reporting standards or frameworks through the lens of <IR>. Source: The International Integrated Reporting Council (2015)

The CRD Landscape Map therefore demonstrates the importance of sustainability reporting in <IR> (Global Reporting Initiative, 2013a). The Landscape Map also makes it evident that no single reporting framework can provide full coverage of the capitals or recommended content of an integrated report. Organisations are required to draw from a combination of guidelines for their integrated report (International Integrated Reporting Council, 2015). The overarching principle of materiality should however be applied by organisations when they decide what to include in their integrated report (International Integrated Reporting Council, 2013).

Some organisations should still continue to issue a separate sustainability report, alongside their integrated report. The material issues arising in the sustainability report are to be included in the integrated report, but the audience for these two

reports is different, and therefore it is still necessary to produce both (Davies, 2013). Adams (2015) finds that a strong sustainability reporting process is often the basis for organisations' integrated reporting process. However, the sustainability disclosures within the integrated report will be improved by applying the guidelines contained within the Framework (Lueg, Lueg, Andersen, & Dancianu, 2016). This, however, requires the management of organisations to understand the relationships between <IR> and sustainability reporting, which has been found to be lacking, despite the efforts of the IIRC to provide clarity (Robertson & Samy, 2015).

During the period included in this study JSE-listed South African companies were required to apply the recommendations in the King III report. A key difference between King III and the Framework is that King III makes specific mention of sustainability reporting within the integrated report, which is not mentioned in the Framework. King III also recognises the guidelines published by the GRI as the most widely accepted sustainability reporting guidelines. In addition, King III maintains that the integrated report should be directed at all stakeholders, while the Framework makes it clear that the integrated report should be directed at the providers of financial capital. King III states that there is a "need to contextualise financial results by reporting on the positive and negative impact the organisation's operations had on its stakeholders. It is important for sustainability reporting and disclosure to highlight the organisation's plans to improve the positives and eradicate or mitigate the negatives in the financial year ahead." (p. 109) It goes on to make explicit reference to reporting on the economic, social and environmental issues faced by the organisation (Institute of Directors of Southern Africa, 2009).

South African organisations therefore had different reporting requirements to companies in the rest of the world (PwC, 2014). These included a mandate to include sustainability disclosures in their integrated reports.

In an attempt to resolve this conflict between King III and the Framework, the Institute of Directors of Southern Africa, which issued King III, released a practice note in 2014. The practice note explained that King III provides the principles and concepts to be applied in preparing an integrated report ("the what"), while the Framework provided detailed guidance on the preparation of the integrated report ("the how") (Institute of Directors of Southern Africa, 2014). The Framework allows for flexibility

in terms of the content of the report, and states that additional information may be included, if required by local laws and regulations (such as the JSE listing requirements), as long as the integrated report retains the characteristic of conciseness (International Integrated Reporting Council, 2013).

South African companies can therefore address their integrated report to all stakeholders, or specifically to the providers of capital, and still meet the requirements of both the Framework and King III, with any conflicts being explained in the report (Institute of Directors of Southern Africa, 2014). As a result South African organisations do tend to have a stronger stakeholder focus (Miller, 2015; PwC, 2014).

This section examined the concepts of <IR> and sustainability reporting, and how they interact with each other. Prior studies in this area will be explored in the next section.

2.4.2 Previous Studies Examining Sustainability Disclosures in Integrated Reports

Integrated reporting is a relatively new form of corporate reporting, therefore studies relating to how sustainability reporting is incorporated in integrated reports were few at the time of writing, and are concentrated in South Africa, being one of the first countries to make integrated reporting mandatory.

Global research

The Global Reporting Initiative (2013c) researched the sustainability information reported in integrated reports of organisations that had adopted integrated reporting in its early stages. At that stage the adoption of integrated reporting was largely voluntary. Most of the organisations surveyed used the GRI guidelines to prepare the sustainability information to be included in their integrated report, with many embedding sustainability information in the integrated report, and the number showing an increasing trend. A large proportion of the organisations examined by the GRI were simply combining their annual reports and sustainability reports with one cover, rather than truly embedding the content, but this trend decreased over the

three years examined, with more organisations integrating information in the final year of this study. The GRI found that the financial services, energy and energy utilities and mining sectors had the highest adoption rates, with financial services being far more compliant than other industries. The lowest adoption rates were among the aviation, food and beverage, chemicals, and real estate industries (Global Reporting Initiative, 2013c).

Stacchezzini, Melloni and Lai (2016) examine integrated reports published on the IIRC website in 2014, to determine how industry type affects sustainability disclosures in integrated reports. They find that companies in environmentally sensitive industries disclose more environmental information in their integrated reports, which they attributed to external pressure by stakeholders. However, in general, they find sustainability disclosures to be of poor quality. Poor company performance in social or environmental areas are not openly disclosed. Both findings demonstrate an attempt to increase corporate legitimacy.

Several studies have examined specific types of disclosures in integrated reports. Melloni (2015) examines intellectual capital disclosures in the integrated reports available on the IIRC website, and finds that disclosures focused on the relational, rather than human or structural capitals. In her study, Melloni finds evidence of impression management techniques. The disclosures provided are primarily narrative in nature. She identifies company size and large amounts of intangible assets to be drivers of intellectual capital disclosures. Adams, et al. (2016) study four large multinational Australian companies and find a noticeable shift towards linking sustainability activities to the company's value creation strategy in line with the guidelines in the <IR> Framework.

South African research

Global research in this area is still limited, but much research has been done in the South African context. Most of the studies find increases in the number of sustainability disclosures in integrated reports, and these disclosures are included in more sections of these reports.

Solomon and Maroun (2012) undertake a study of the annual and integrated reports of ten JSE-listed South African companies with high environmental or social impact, for the years 2009, 2010 and 2011. Their aim was to examine the impact of the 2009 King III report on the social, environmental and ethics reporting of these companies. They find a significant increase in the amount of such disclosures in integrated reports in 2010 and 2011, with a noticeably higher increase in the reporting of social issues. They also identify a number of disclosure themes, including the drivers of integrated reporting, risk management, an increasing degree of quantification and materiality.

Covering a slightly longer period in South Africa, Carels, Maroun and Padia (2013) conduct a study of sustainability disclosures in the integrated reports of 15 JSE-listed mining companies between 2008 and 2012, covering the period of initial adoption of integrated reporting. They find that companies' ethical disclosures remained constant throughout the period examined, but their environmental and social disclosure increased dramatically. The most common social disclosures that were more integrated related to HIV/Aids, transformation, and labour relations. The environmental disclosures were most often included as qualitative disclosures with some key performance indicators. Attempts were made by the organisations to portray how their values and operations were being aligned with the environmental and social issues they faced.

The two studies mentioned focus on high impact organisations. Setia, Abhayawansa, Joshi and Huynh (2015) and Ahmed Haji and Anifowose (2017) expand this research with more diverse samples.

Setia, et al. (2015) expand on the study by Solomon and Maroun, examining the top 25 companies listed on the JSE, over a similar time period. They have similar findings, with both the social and relationship capitals being given more disclosure. They further conclude that companies disclose more when their reports are scrutinised closely by regulators. Therefore, stakeholders benefit by more stringent regulation, which make <IR> mandatory.

Ahmed Haji and Anifowose (2017) examine the sustainability disclosures in integrated reports of 82 South African companies and find that intellectual and

human capital disclosures increase over time. In addition, relational capital disclosures were more frequent in high impact industries, such as mining. However, they find that companies did not provide disclosure about the interrelationships of the various capitals, and the trade-offs between them. They concluded that although the number of disclosures increased over time, the integration that should have occurred in integrated reports was not evident.

Raemaekers and Maroun (2014) examine a specific subset of sustainability disclosures, risk disclosures, as set out in King III. They examine the trends in reporting these disclosures of a broad range of South African listed companies between 2010 and 2012. They find a significant increase in risk disclosures over the period examined. However information was often repeated, which is similar to the findings of Solomon and Maroun (2012). They also find that disclosures tend to be generic, rather than applying to their specific context. Furthermore, there was a lack of integration between the risk disclosures and key financial or non-financial measures.

In addition to findings about the type and extent of sustainability disclosures there are also findings relating to the extent of integration within the integrated reports. Solomon & Maroun (2012) find sustainability information was included in a more sections in the integrated reports over the period they examined, although they find a great deal of repetition. They conclude that some of the companies may have attempted to obtain maximum benefit from a limited amount of information. Carels, et al. (2013) also find that sustainability disclosures were integrated into more sections of integrated reports over the period.

2.4.3 Summary

The relationship between <IR> and sustainability reporting was initially unclear. However, the IIRC resolved this by demonstrating how sustainability reporting guidelines, such as those issued by the GRI, meet some of the guidelines of the <IR> Framework. For South African organisations the additional conflicting requirements of King III have been resolved by the issuing of a practice note by the Institute of Directors, which clarifies the relationship between the different requirements.

From the limited research, it appears that organisations include an increasing number of sustainability disclosures in their integrated reports, with these disclosures also being included in more sections of their integrated reports. However, a trend observed repeatedly is that sustainability information was often repeated in the reports. Further research is required to identify additional trends in sustainability reporting in integrated reports, as is done in this study.

2.5 Conclusion

The concept of corporate sustainability has gained popularity over the last 30 years, since the introduction of sustainable development by the WCED (Bruntland, 1987). Although the concept has a wide variety of meanings, it appears to be generally accepted to mean the sustainability of organisations in the long term, requiring attention to be paid to the economic sustainability of the organisation and its impact on the environment and broader society (Baumgartner & Ebner, 2010; Robèrt, et al., 2002). It is generally acknowledged that the needs of a broader range of stakeholders should be considered in order to enhance the sustainability of organisations (Adams & McNicholas, 2007). Sustainability practices are being adopted by a broad range of organisations. Some organisations adopt these practices because their management believes it is the right thing to do (Holliday, et al., 2002), but many also consider that their economic performance is enhanced by these practices (UNEP-Fi et al., 2007).

Sustainability of an organisation is enhanced when it reports on its activities and is held accountable by its shareholders and other stakeholders (Adams & McNicholas, 2007). Sustainability reporting takes many forms, but the primary method of communication is the sustainability report (Marimon et al., 2012). One key reason that organisations use sustainability reporting is to increase their legitimacy within society (Tilling & Tilt, 2010). For this reason, there is a tendency to limit the negative disclosures in sustainability reports, as there is a perception that this will damage the reputation and legitimacy of organisations. But the legitimacy of the organisation can in fact be damaged by withholding such negative information, because sustainability disclosures tend to be perceived as a public relations tool, or green-washing, by many critics, and by only publishing the good news, this view is validated (Hahn & Lülfs, 2014). Therefore, although there has been a large increase in the number of

organisations reporting on sustainability activities these disclosures are not all widely accepted.

The introduction of integrated reporting has brought sustainability reporting into the mainstream, and it has gained more general acceptance (Global Reporting Initiative, 2013b). The objectives of <IR> and sustainability reporting are not the same. <IR> focuses on how organisations create value by interacting with their external environment, whereas sustainability reporting focuses on the impact of the organisation on the external environment (Carels, et al., 2013). <IR> is gaining global acceptance, and is being widely adopted by organisations (International Integrated Reporting Council, 2015), particularly in countries like South Africa where it is mandatory on an “apply or explain” basis (EY, 2013).

However, there is a lack of research into sustainability disclosures in integrated reports, and further research is needed to identify how organisations are tackling the challenge of presenting a holistic view of their strategies and operations, by including their sustainability challenges. The current study provides empirical data to address these issues.

Chapter 3 Methodology

This chapter will outline the methodology used in collecting and analysing the data to determine trends in sustainability disclosures included in the integrated reports of South African listed companies. Reports from 2011 and 2015 are covered in the analysis.

3.1.1 Research design

Research into the corporate reporting of organisations is typically conducted using text or content analysis (Merkl-Davies, et al., 2011). Content analysis seeks to find order and patterns within text in order to reduce its complexity and to allow comparison with other texts (Groeben & Rustemeyer, 1994). Content analysis can be separated broadly into positivist content analysis, interpretive content analysis, and critical text analysis (Chua, 1986; Merkl-Davies et al., 2011). Positivist content analysis tends to be quantitative in nature, while interpretive text analysis endeavours to find meaning in text through interpretation. Critical content analysis on the other hand seeks to challenge the text and ideas presented (Chua, 1986; Merkl-Davies et al., 2011).

This study adopts an interpretive content analysis approach and the methodology employed is similar to that used by Raemaekers and Maroun (2016), who identifies trends in risk disclosures in the integrated reports of South African listed companies. Similar to the stance taken by Carels, et al. (2013), the focus of this study is on integrated reports issued by companies, with other publications and communications excluded.

Interpretive content analysis can be further explained as a process whereby the contents of certain material is analysed methodically in order to identify themes or trends (Groeben & Rustemeyer, 1994; Leedy & Ormrod, 2014; Merkl-Davies et al., 2011). Interpretive content analysis is essentially qualitative in nature and is inherently subjective because the researchers may interpret content differently. However there is an element of quantitative research within the research design,

because occurrences of particular disclosures are counted, and statistical analysis is performed on the data (Leedy & Ormrod, 2015).

The 2011 and 2015 integrated reports of 45 companies listed on the JSE were analysed to identify the trends in companies' inclusion of sustainability information. The G4 guidelines provided by the GRI (2013a) were used as a basis in developing a disclosure checklist for this analysis.

2011 was selected because 2011 was the first year that companies listed on the JSE were required to prepare integrated reports (Solomon & Maroun, 2012). At that stage they had only the guidance provided by King III, which included sustainability disclosures as an integral part of integrated reports (Institute of Directors of Southern Africa, 2009). However, at this point companies had very little guidance on which sustainability disclosures to include, or how to do so. 2015 was selected as the second observation period because the <IR> Framework and the G4 guidelines issued by the IIRC in 2013 would have been incorporated into reporting guides by then (International Integrated Reporting Council, 2013).

3.1.2 Sample selection

The sample of 45 companies was selected using the same methodology as Raemaekers and Maroun (2016). The 396 companies listed on the JSE at 31 December 2015 were ranked in terms of market capitalisation at that date, and then categorised by sector, as shown in Table 4. The population was adjusted to remove companies for which no integrated report was available for the 2011 financial year, as well as those companies that do not have a primary listing on the JSE, because these companies are not required to prepare integrated reports (Johannesburg Stock Exchange Limited, 2013). The remaining companies, listed by size, were used to select the sample. Where an industry had more than 10 companies, the largest 6 were selected, and where an industry had less than 10 the largest 4 were chosen. The exception was the oil and gas industry which consisted of only 1 company after the exclusions, and therefore this company was included. This resulted in a sample of 45 companies, and a total of 90 integrated reports. Although this sample is only 15% of the adjusted population, it is acceptable to have a small sample for content

analysis, because the results are not generalizable, and the process is extremely labour intensive (Solomon and Maroun, 2012).

Sample selection					
Sector	Population	No 2011 IR available	JSE not primary listing	Adjusted population	Sample
Basic Materials	76	-8	-11	57	6
Consumer Goods	28	-4	-4	20	6
Consumer Services	46	-2	-1	43	6
Financials	129	-44	-10	75	6
Healthcare	9	-2	0	7	4
Industrials	83	-7	-1	75	6
Oil & Gas	4	-2	-1	1	1
Technology	16	0	0	16	6
Telecommunications	5	0	0	5	4
	396	-69	-28	299	45

Table 4 Sample selection

3.1.3 Sustainability disclosure checklist

Following Raemaekers and Maroun (2016), a sustainability disclosure checklist was developed based on the G4 requirements (GRI, 2013a), and supplemented with issues specific to JSE SRI requirements. These relate to Broad-based Black Economic Empowerment ('BBBEE') disclosures (JSE, 2014a). BBBEE is an important mechanism to address the social wrongs of the past in South Africa, and is an integral part of the sustainability activities of South African companies (Ahmed Haji & Anifowose, 2016b).

The checklist used the G4 guidelines as a basis, with the three main categories linked to the specific recommended disclosures relating to economic and environmental performance and social sustainability. Social sustainability is further divided into human rights, labour practices and decent work, product responsibility and society. Each of these categories has several sub-categories of disclosures, 5 for economic sustainability, 12 for environmental disclosures, and 36 for social disclosures, divided into 11 for human rights, 10 for labour practices and decent work, 6 for product responsibility, and 8 for society. The checklist included each of

the disclosure sub-categories, as well a BBBEE specific category, for a total of 53 disclosure categories. Appendix A shows the full disclosure checklist used.

3.1.4 Data collection

The integrated reports of the 45 companies selected were downloaded from the respective companies' websites. Where a company indicated that more than one document comprised the integrated report for the year, all relevant documents were downloaded. Each report was read in detail, gathering the information outlined below. The length, or number of pages, of each report was also recorded.

Each report was evaluated to determine the application of specific criteria, as explained in the next section. The sustainability disclosures observed were also compared to the sustainability disclosure checklist.

Key requirements for sustainability disclosures in integrated reports were identified from the <IR> Framework (International Integrated Reporting Council, 2013), and each integrated report was evaluated against these criteria. This can be described as establishing 'how' sustainability disclosures were included within the integrated reports. The specific sustainability disclosures required either by the GRI or BBBEE were included and were compared to those on the sustainability disclosure checklist. This can be described as determining 'what' sustainability disclosures were included in the integrated reports.

The evaluation of each of these criteria within reports was subjective, as is typical of qualitative research. However, this is not problematic for exploratory research of this nature, and this does not discredit the research, but should be borne in mind in evaluating the results (Leedy & Ormrod, 2014). For each of these criteria integrated reports were evaluated, giving consideration to the reports of companies in the same industry which would face similar circumstances (Global Reporting Initiative, 2013c). The process used to code the data are outlined in the next sections.

3.1.4.1 Integration of sustainability disclosures

The <IR> Framework requires integrated reports to include disclosures relating to all six capitals in an integrated manner (International Integrated Reporting Council, 2013). Each report was therefore evaluated according to the extent to which they integrate sustainability disclosures in the integrated report.

The reports were coded using the following scale:

0 = no sustainability information included

1 = reference made to an external sustainability report, with no sustainability information included in the integrated report

2 = sustainability report included as a stand-alone section of the integrated report

3 = traditional sustainability report divided into smaller parts and included throughout the integrated report, but without being blended and integrated with strategic, operational and financial information

4 = sustainability information blended and integrated with strategic, operational and financial information throughout the integrated report

3.1.4.2 Use of KPIs for sustainability disclosures

When integrated reporting was in its infancy, Eccles and Serefeim (2011) suggested the use of key performance indicators (KPIs) to supplement and enhance the narrative sustainability disclosures in integrated reports. The Framework does not prescribe specific KPIs, however the GRI guidelines provide specific KPIs that can be used for sustainability reporting. Many companies therefore use the KPIs provided by the GRI to guide their sustainability disclosures in their integrated reports (Oshika & Saka, 2017).

To assess the extent of the use of KPIs by companies, the contents of each integrated report was coded with one of the following codes:

0 = no sustainability KPIs

1 = limited sustainability KPIs

2 = extensive sustainability KPIs

The KPIs used for disclosures in the integrated report were assessed against the total number of KPIs used, for sustainability and non-sustainability measures, and

was also compared with KPIs used in other integrated reports included in the sample, to determine if the KPIs were limited or extensive.

3.1.4.3 Inclusion of material sustainability disclosures within integrated reports

The <IR> Framework places emphasis on materiality as a consideration for disclosures in integrated reports (International Integrated Reporting Council, 2013). In addition, the G4 guidelines also emphasise the importance of limiting sustainability reporting to material matters (Global Reporting Initiative, 2013a). However this emphasis on material disclosure was absent prior to the release of the Framework and the G4 guidelines in 2013 (Global Reporting Initiative, 2013a), and companies had limited guidance on which disclosures to include. King III referred to the GRI G3 guidelines, the emphasis on materiality only became clear when the Framework and G4 guidelines were released.

The integrated reports were coded to indicate how companies include material sustainability disclosures:

0 = immaterial sustainability disclosures included in integrated report

1 = sustainability disclosures limited to material issues

The identification of material and immaterial disclosures is subjective, and the results of this coding should be considered in this light, although this is acceptable for qualitative research of this nature (Leedy & Ormrod, 2015). The classification of integrated reports into those that include immaterial sustainability disclosures, and those that contain only material disclosures is based on findings in literature on what is relevant to industries. It also takes into account the researcher's knowledge of the industry of the company, and the sustainability issues that would be relevant to the industry. However, this measure should be considered as the researcher's subjective impression.

3.1.4.4 Balance of good and bad news relating to sustainability disclosures

Companies have been found to limit their disclosure of bad news in corporate reports (Adams, 2004; Diouf & Boiral, 2017), because they see publishing of bad news as a threat to their legitimacy. However, stakeholders perceive such under-reporting as an element of green-washing (Hahn & Lülfs, 2014).

The integrated reports were therefore evaluated to consider if there was balanced reporting in the sustainability disclosures, as follows:

0 = emphasis is placed on 'good news' sustainability disclosures

1 = a balanced commentary is provided

An integrated report was given the code 1 if there was disclosure of unfavourable events or activities relating to sustainability issues. For example, the mining companies typically disclose their injury and fatality rates. Where a company only provided favourable disclosures, they were coded as 0.

3.1.4.5 Sustainability disclosures within integrated reports

The data described in the previous section relate to how companies' integrated reports covered sustainability, following the guidelines of the Framework. The data described next pertains to what sustainability topics were reported on.

Each integrated report was analysed and scored based on the disclosure checklist. Each disclosure was identified and recorded in an MS Excel spreadsheet in a tabular format with the relevant code for the applicable disclosure category. The total number of disclosures per category, and grand totals for main categories of economic, environmental and social disclosures were calculated.

When certain types of disclosures are frequently repeated they are seen to be prioritised by preparers of integrated reports (Campbell, Moore, & Shrives, 2006; Kilian & Hennigs, 2014). The manner in which the data is recorded allows the data to be analysed further to identify disclosure categories and the number of disclosures per category. The quality of the disclosures was not assessed in this coding, as per the methodology used by Raemaekers and Maroun (2016).

In addition a word search was conducted for each disclosure category for each report, using a word search tool, in a similar approach to that of Raemaekers and Maroun (2016). This was done to minimise human error in the data collection and ensure that all relevant disclosures were included. After an initial sample of five integrated reports were examined in this way, the key words used were refined to the list included in Appendix A. Each keyword identified was examined in context to determine if it was indeed a valid term related to sustainability disclosure. For example, in the case of the integrated report of Blue Label Telecoms (a telecommunication company) the keyword 'label' (relating to the responsible labelling of products) was in most cases not a valid sustainability disclosure term.

A disclosure was given a code if it conveyed a sustainability concept. A paragraph relating to a single sustainability category was considered to be a single disclosure, as opposed to counting each occurrence of a category or key word as a separate disclosure. However, a single paragraph was at times relevant to more than one disclosure category and was allocated to both. For example, the Spar Group's 2015 integrated report included a paragraph including the word 'carbon' once, and 'energy' three times (The SPAR Group Ltd, 2015, p. 58). This was counted as a single disclosure but was allocated to the categories of 'emissions' and 'energy'.

3.1.4.6 Sustainability disclosures included in management commentary

Adams (2002) finds that the extent of sustainability reporting was related to the attitude of senior management. This was borne out by Nazari, et al. (2015), Adams and McNicholas (2007) and Gray, et al. (1995). An integrated report is a report by the management of an organisation in its entirety (International Integrated Reporting Council, 2013). However, integrated reports typically contain a chairman's report, a chief executive officer's report and a finance director's report. These reports reflect the attitude of senior management to issues such as sustainability.

The extent of commentary on sustainability issues in each of these reports was coded as follows:

- 0 = no sustainability commentary
- 1 = limited sustainability commentary
- 2 = extensive sustainability commentary

Like the coding of KPIs, the extent of management commentary was viewed in light of the total amount of commentary, as well as in comparison with other integrated reports in the sample, to determine if their commentary was limited or extensive.

Separate columns were created for the chairperson's, CEO's and CFO's reports. The individual sustainability disclosures were recorded in the same way as the disclosures for the full integrated report, per disclosures category, and the total for each report was calculated, as well as the total disclosures per category. These disclosures were included in the total disclosures used for analysis but were also analysed separately.

3.1.4.7 Company metrics

Research finds that industry type (Adams, 2002; Marimon, et al., 2012; Maubane, et al., 2014; Roberts, 1992), company size (Adams, 2002; Frías-Aceituno, et al., 2013; Roberts, 1992; Wuttichindanon, 2017) and company age (Gray et al., 1995; Roberts, 1992) influence the extent and quality of sustainability reports. However a study by Wuttichindanon (2017) did not find the age of the company to be an influencing factor.

Frias-Aceituno, et al. (2014) conduct research on integrated reporting, and find that company size is also a determining factor in the adoption of integrated reporting.

Although other factors such as the share price have also been shown to influence the extent of sustainability reporting (Adams, 2002), the aforementioned factors (industry type, and company size and age) have consistently been shown to be relevant, and are therefore included in this study.

In order to determine if these factors influence sustainability disclosures company metrics for the companies in our study were obtained from Bloomberg. The industry was represented by the sector in which the company was listed on the JSE. The size was determined based on the market capitalisation of the company on 31 December of either 2011 or 2015. The age was determined based on the date of incorporation of the company.

3.1.5 Statistical analysis of data

The data collected for this study differed from that collected by Raemaekers and Maroun (2016) and therefore the statistical analysis differs in some respects. The process of collecting data described above produced a data set with various characteristics. Ordinal variables produced were the overall inclusion of sustainability disclosures, the use of KPIs, the materiality of disclosures, the balance of good and bad news, and the extent of commentary in management reports. Interval variables produced were the age and size of the company, and the number of sustainability disclosures per the disclosure checklist, while the industry classification is a nominal variable. As a result of the different variable types, multiple regression analysis could not be performed, and the relationship between various variables were examined separately (Keller & Warrack, 2003).

Each of the datasets that related to how companies included sustainability disclosures in their integrated reports was treated in a similar fashion, as this data was all ordinal. Bar charts were used to depict the total number of companies included in each of the category codes for the measure in 2011 and 2015. Bar charts were also used to disaggregate this information per industry for each year. These bar charts were analysed and discussed, and a sign test was performed in order to determine if there was a statistically significant difference in that measure for individual companies. A Fisher's Exact test was then used to determine if there was a significant relationship between that measure and the industry classification.

The data relating to the number of sustainability disclosures was interval in nature and required different statistical analysis. A histogram, box plot and descriptive statistics were used to depict the distribution of the total number of disclosures in each year. A paired t-test was used to determine if there was a significant difference in the number of disclosures for individual companies, after confirming that the data was normally distributed.

The sustainability disclosures per disclosure category were then further analysed by means of descriptive statistics and a bar chart was created that showed the total sustainability disclosures per company for each year, disaggregated by disclosure

category, and these findings were discussed and analysed. A paired t-test was again performed, this time for each category, in order to determine if there was a significant difference in the number of sustainability disclosures per category for each company.

The total sustainability disclosures, and the disclosure categories were analysed by industry, using descriptive statistics and a bar chart.

The data collected on management's commentary on sustainability issues were then analysed. The analysis followed a similar pattern to that used previously. The codes assigned to each report based on the extent of sustainability disclosures in the management commentary was ordinal data, which was then analysed in the same way as other ordinal data in this study. The total number of disclosures, as well as the individual disclosure categories were analysed in a similar way to the total sustainability disclosures for the integrated report.

The final section of the statistical analysis followed the analysis used by Raemaekers and Maroun (2016) for analysis of the relationships between the variables identified and analysed up to this point.

A Spearman's correlation test was performed separately for 2011 and 2015, including each measure of how companies include sustainability disclosures in their reports, the total number of disclosures, the number of pages in the report, and the age and size of the company. To include the extent of management commentary on sustainability issues, a simple average of the scores for the three management reports was calculated.

The final analysis performed was a k-means cluster analysis. The analysis was performed separately for 2011 and 2015. In order to perform this analysis, the data must be standardised. The standardise function in Statistica was used for this purpose. Standardised data has a mean of 0 and a standard deviation of 1. The analysis was then run in order to find four clusters, such that the mean for each company's measure of a category would have the shortest distance to the cluster mean for that category. The characteristics of each cluster was described and analysed. Finally, a bar chart was presented, where the companies in each industry were classified by their cluster in 2011 and 2015 and discussed.

The next chapter will present the results of these statistical tests and an analysis of the findings.

Chapter 4 Findings and discussion

This chapter is divided into three sections. Firstly, it examines how companies are including sustainability disclosures within their integrated reports, based on the guidelines provided by the IIRC and GRI in the <IR> Framework (2013) and the G4 Guidelines (2013a). Secondly, it will look specifically at how sustainability disclosures are integrated into the report, the use of KPIs, whether or not sustainability disclosures are limited to material issues, and finally, how balanced the disclosures are in providing positive and negative disclosures.

The chapter will then examine what sustainability disclosures were provided by companies. This will be done for total disclosures, and then for individual disclosure categories. This will also include specific analysis of the sustainability disclosures included in the reports of the top management of the company in the integrated reports.

Finally, an analysis will be conducted of all variables, using a Spearman's correlation test, as well as a k-means cluster analysis, to understand the interrelationships of each of these reporting behaviours.

This study makes no attempt to measure the quality of the sustainability disclosures, but rather the quantity of these disclosures, and the manner in which sustainability disclosures are integrated in the integrated reports.

4.1 Integration of sustainability disclosures within integrated reports

The International <IR> Framework requires organisations to integrate information relating to all six capitals, including the natural, social and relational and human capitals (International Integrated Reporting Council, 2013). These capitals echo the sustainability disclosure categories of the GRI guidelines. Prior to the integrated reporting initiative organisations were encouraged to prepare a sustainability report in addition to their other reports (Global Reporting Initiative, 2013a).

To understand how companies were complying with the guidance in the Framework to integrate information relating to all six capitals in their integrated report, the reports included in the sample were coded according to the extent of inclusion and integration of sustainability disclosures. The integrated reports were coded using the following scale:

0 = no sustainability information included

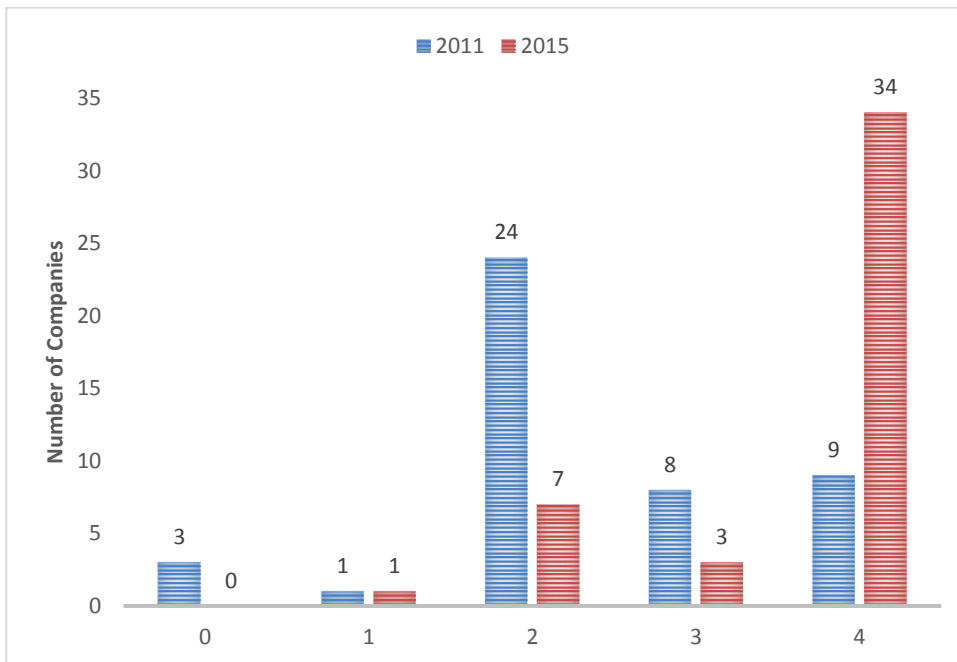
1 = reference made to an external sustainability report, with no sustainability information included in the integrated report

2 = sustainability report included as a stand-alone section of the integrated report

3 = traditional sustainability report divided into smaller parts and included throughout the integrated report, but without being integrated with strategic, operational and financial information

4 = sustainability information blended and integrated with strategic, operational and financial information throughout integrated report

Figure 1 shows the integration of sustainability disclosures for 2011 and 2015 for the 45 companies included in the study, and Figure 2 and Figure 3 present the integration of sustainability disclosures by industry, for 2011 and 2015 respectively.



0 = no sustainability disclosures
 1 = external sustainability report
 2 = separate section
 3 = limited integration
 4 = fully integrated

Figure 1 Integration of Sustainability Disclosures

In 2011 24 of the 45 companies include a separate section on sustainability in their integrated reports⁵, while only nine companies fully integrated their sustainability disclosures. In 2015 this position is reversed with 34 companies fully integrating their sustainability disclosures, while seven included a separate section. For example, Pioneer Foods (a consumer goods company) include a 20-page sustainability report as a separate section of their 2011 integrated report, under the section 'Our responsibility', with minimal sustainability disclosures in other sections of their report. This was given the code of 2. In 2015 they again included a 24-page sustainability report; however, sustainability disclosures were also included in every other section of the report, most notably the business model and operational reviews, and thus the 2015 report was coded as 4. It is evident that as companies gain experience preparing integrated reports, together with the guidance provided by the Framework released in 2013, the integration in their reports increased.

A sign test was performed, to determine if there was a significant change in the integration of sustainability disclosures between 2011 and 2015 for each company. The results are shown in Table 5 below.

Sign test for level of integration	
Number of non-ties	31
Percent 2011 < 2015	93.5%
Z value	4.67
Z _{0.025}	1.96
p-value	0.000003

Table 5 Sign test - change in overall integration

The results indicate that there was a significant increase in the integration of sustainability disclosures between 2011 and 2015, at the 5% confidence level. This is expected as companies should improve in their integrated reporting as they gain experience in preparing these reports, and in addition as they benefit from the guidance provided in the Framework (International Integrated Reporting Council, 2013).

⁵ All integrated reports were downloaded from the relevant company's website. A list of the websites is included in Appendix B.

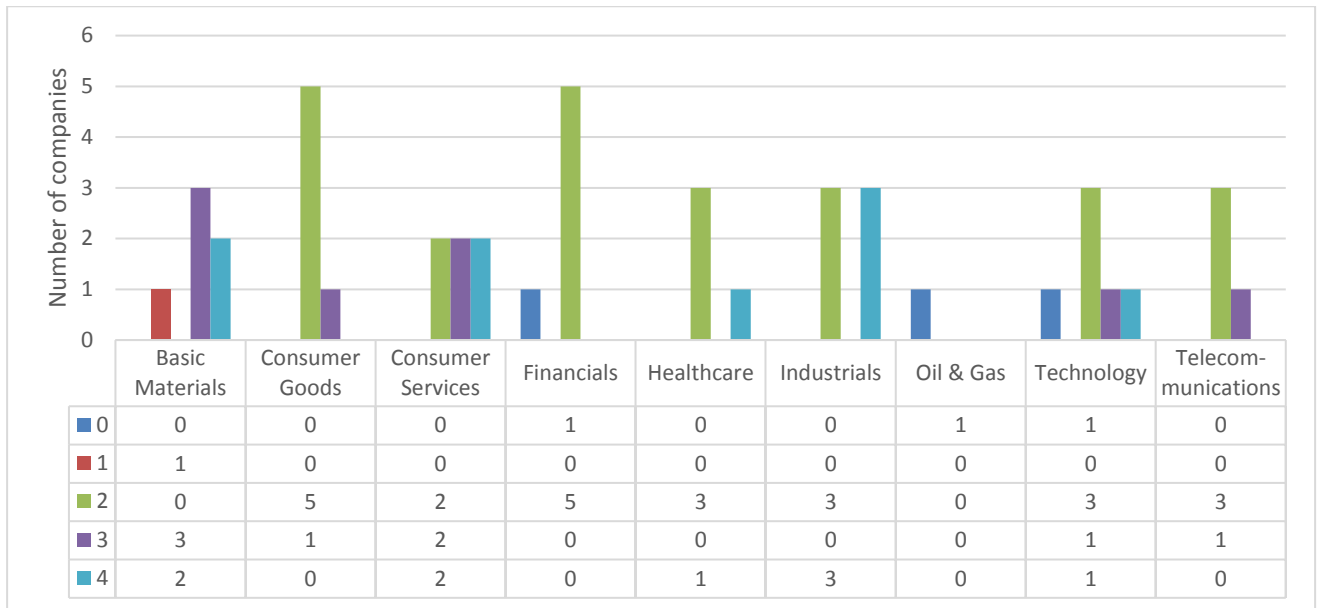


Figure 2 Overall integration by Industry - 2011

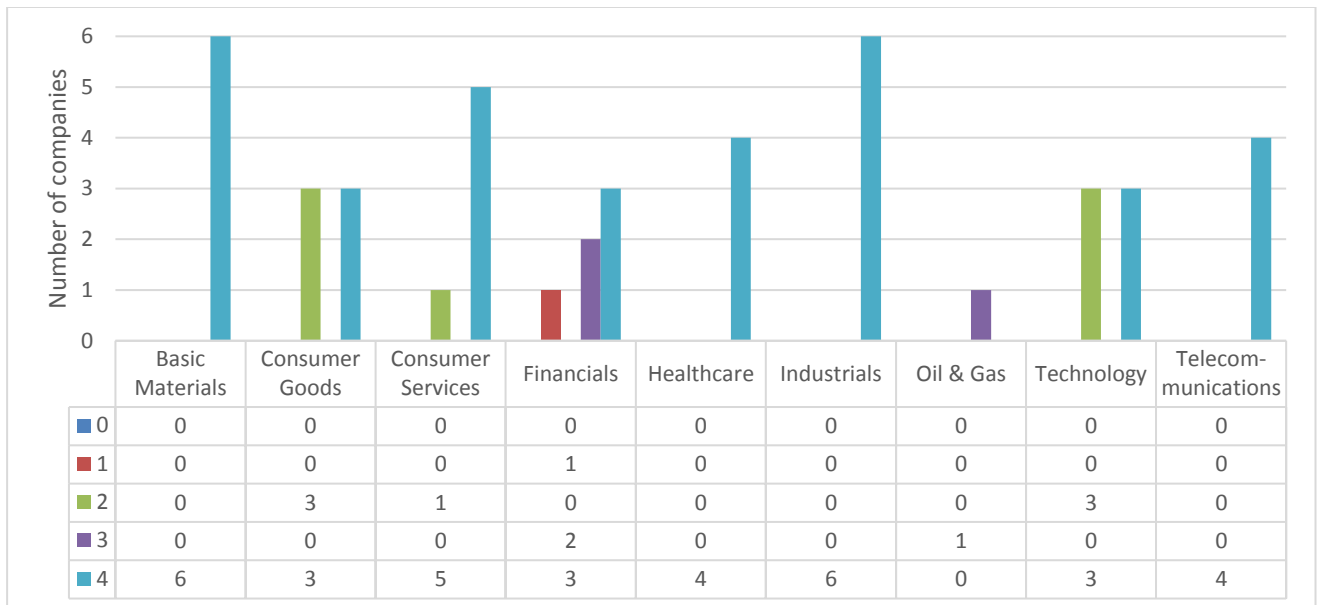


Figure 3 Overall integration by Industry - 2015

In 2011 only the basic materials, consumer services, healthcare, industrials, and technology industries had companies that fully integrated sustainability disclosures into their integrated reports. Each of these industries showed more integration in 2015, with all companies in the basic materials, healthcare, and industrials sectors fully integrating their sustainability disclosures in 2015.

None of the four companies in the telecommunications industry fully integrated their disclosures in 2011, but all of these companies had fully integrated their sustainability disclosures by 2015.

Five of the six companies in the financial sector included a separate section for sustainability in 2011, while one company in this sector did not include sustainability disclosures in their integrated report. This industry improved, with reports of three of the six companies being fully integrated in 2015.

Research conducted by the Global Reporting Initiative (Global Reporting Initiative, 2013c) showed that the mining sector (included in basic materials) had a high adoption rate for the inclusion of sustainability disclosures, which is witnessed again in this research on South African companies. However, in the GRI study, the financial services sector also showed high adoption of sustainability reporting, and this is not seen in sustainability disclosures of the sampled companies in 2015.

To determine if there is a statistically significant relationship between the extent of integration and the industry, Fisher's Exact test was performed. To perform the test, the data needs to be adjusted to have two categories for inclusion. Categories 0-2 were combined to indicate limited integration of sustainability disclosures, while categories 3 and 4 were combined to indicate extensive integration of these disclosures. The oil & gas industry was also combined with the basic material category, to reduce the number of industry categories to eight. The revised categories are shown in

Appendix C.

The p-value for the Fisher's test is 0.117313 for 2011, and 0.066974 for 2015⁶. Although the significance increases between 2011 and 2015, there is still only weak statistical evidence that there is a relationship between the industrial sector of a company and its integration of sustainability disclosures in its integrated report. The impact of company age and size will be explored in section 4.7.

In summary, sustainability disclosures in integrated reports became more integrated from 2011 to 2015, overall, and for individual companies. Most companies included a separate sustainability section in 2011, while most fully integrate their sustainability disclosures by 2015. There is no clear relationship between integration of these reports and industrial sector. However, companies in the basic materials industry showed the most integration, while those in the financial sector showed the least integration.

4.2 Sustainability Key Performance Indicators (KPIs)

The <IR> Framework (International Integrated Reporting Council, 2013) identifies KPIs as a useful tool in communicating with stakeholders how a company adds value for all six capitals, as well as the interconnectedness of information. This reporting tool is therefore a useful one in enabling an organisation to include sustainability disclosures in their integrated reports. Perrini and Tencati (2006) also identify the critical nature of KPIs in enhancing stakeholder accountability.

Each integrated report included in the sample was evaluated to determine the extent of use of sustainability KPIs⁷, relating to economic sustainability, and environment and social performance. Where no KPIs are disclosed, the company was coded as 0. If a limited number of KPIs are included the company was coded as 1. Where extensive KPIs are included in the integrated report, the company was coded as 2. As explained in Chapter 3, this classification between limited and extensive use of KPIs was based on the absolute number of KPIs disclosed, as well as relative to other integrated reports in the sample.

⁶ The Excel addin downloaded from www.real-statistics.com was used to perform this test. The output contained only the p-values as presented here.

⁷ All references to KPIs refer specifically to sustainability KPIs.

Figure 4 depicts the use of KPIs for sustainability disclosure in integrated reports in 2011 and 2015, and Figure 5 and Figure 6 show sustainability KPIs included in integrated reports, grouped by industry.

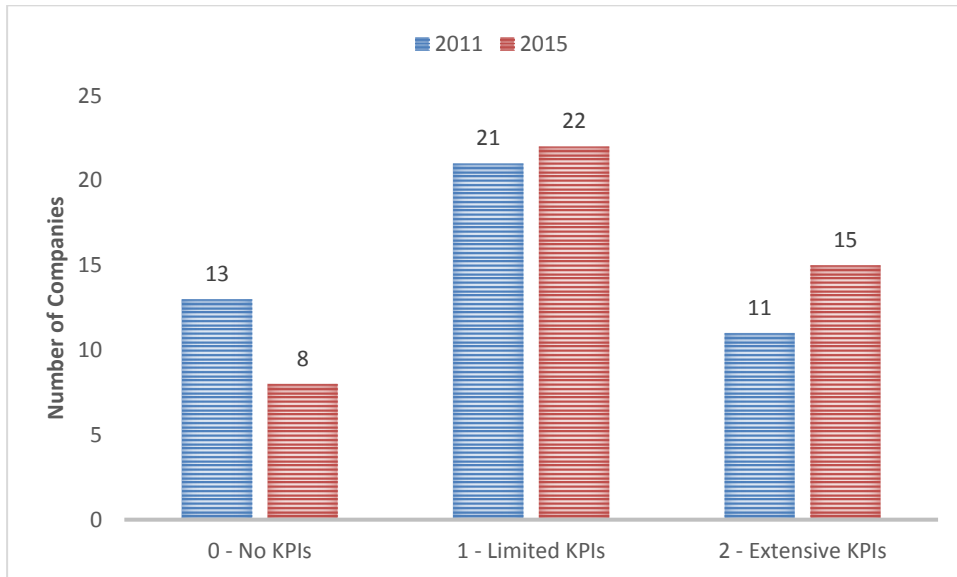


Figure 4 Sustainability KPIs

Most companies include KPIs in both years, with a marginal decrease in the number of companies that presented no KPIs. However, most companies included only a limited number of KPIs for both years. No significant change is observed between the 2 years.

A sign test was conducted, in order to determine if there was a significant change in the use of KPIs by each company between 2011 and 2015. The results are shown in Table 6.

Sign test for use of KPIs	
Number of non-ties	20
Percent 2011 < 2015	70.0%
Z value	1.565
Z _{0.025}	1.96
p-value	0.117

Table 6 Sign test – change in use of KPIs

The results of the sign test reveal that the use of KPIs increased across the sample. However, they also show that there was no statistically significant increase in the use

of KPIs for any company. On closer examination of the data, 25 companies had no change in the use of KPIs, 14 companies increased their use of KPIs, and six companies adopted fewer KPIs than in 2011.

This indicates that the inclusion of KPIs in an integrated report relates more to company specific issues than to external factors that would create a trend. Alternatively, the decision to include KPIs may be linked to a move to reduce immaterial sustainability disclosures, in line with the Framework and the G4 Guidelines (Global Reporting Initiative, 2013a; International Integrated Reporting Council, 2013). The materiality of sustainability disclosures presented is discussed further in section 4.3.

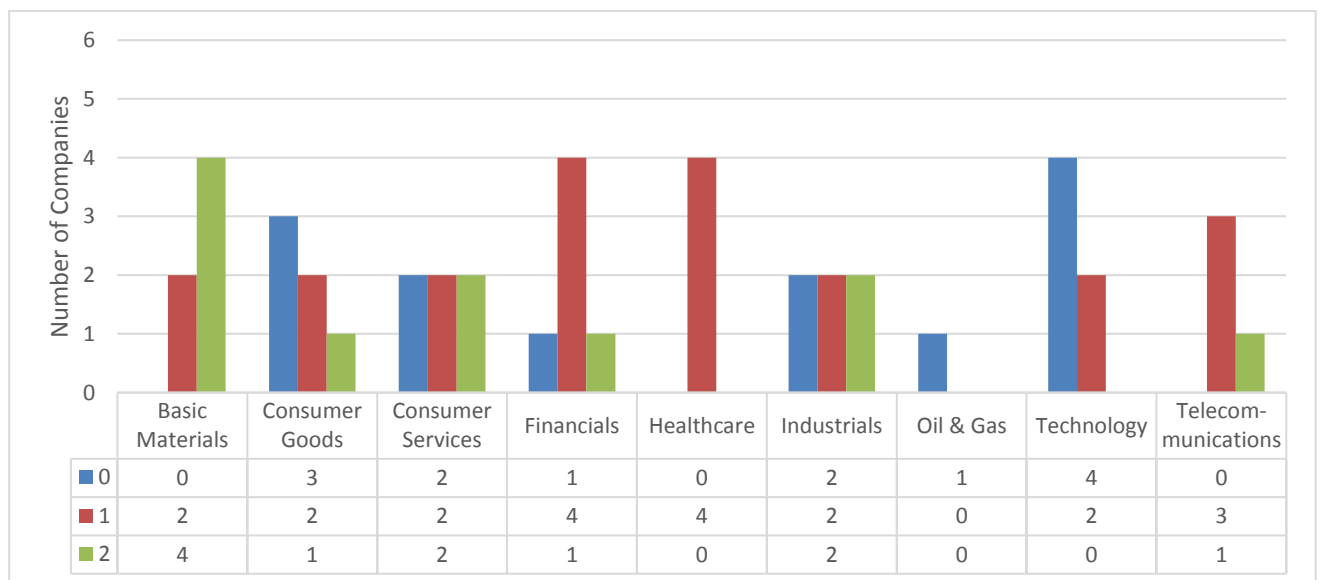


Figure 5 Sustainability KPIs by Industry - 2011

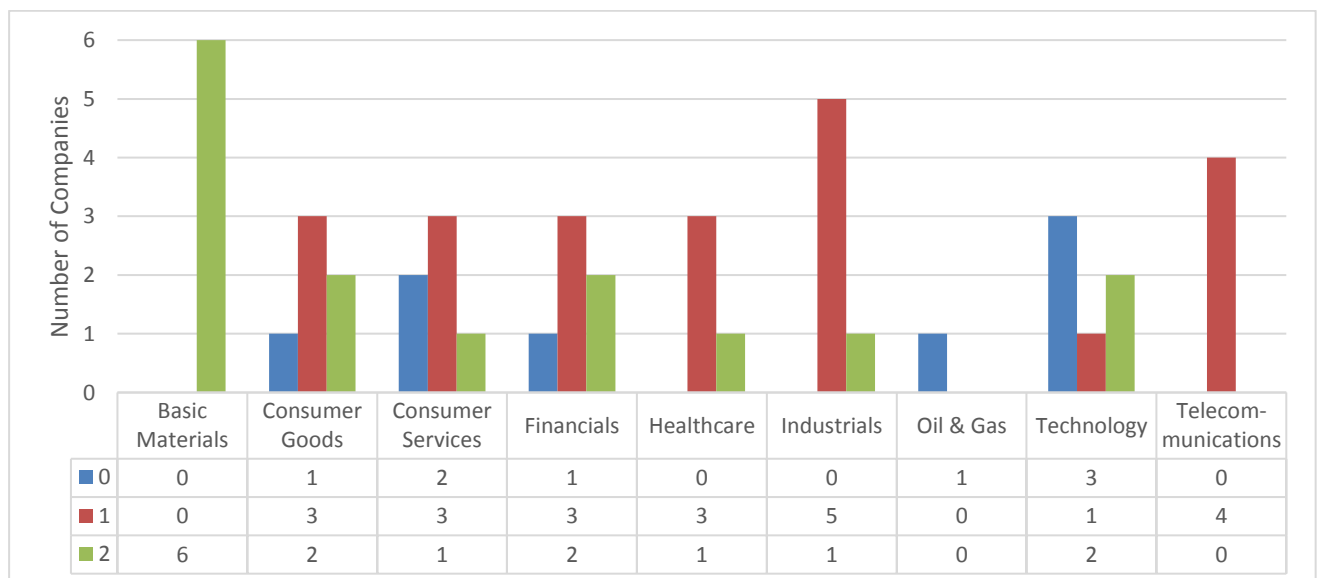


Figure 6 Sustainability KPIs by Industry - 2015

In 2011 companies in the basic materials sector used KPIs most extensively, while those in the technology sector made the least use of these indicators. This pattern is repeated in 2015. The basic materials sector includes mining companies, for whom KPIs around safety and the use of resources are particularly relevant. Although companies in the technology sector made greater use of KPIs in 2015, three of them did not use KPIs. Companies in the consumer services, industrials and telecommunications sectors decreased their use of KPIs, with a shift to disclosures based on just a few KPIs.

A Fisher's Exact Test was performed to determine if there is a statistically significant relationship between industrial sector and the use of KPIs in reporting. The result was a p-value of 0.37 for 2011 and 0.11 for 2015. Neither of these results shows a strong relationship, although there was a stronger relationship in 2015.

By way of an example, Mustek (a technology company) increased their use of KPIs from limited to extensive between the two years. In 2011 their use of KPIs was limited to staffing issues, BBBEE performance, carbon emissions, energy consumption, and waste management. In 2015 these were expanded to include more extensive staffing KPIs, as well as KPIs relating to transformation expenditure and fuel consumption. By contrast, Vodacom (a telecommunications company) reduced the number of KPIs used in their reporting from 2011 to 2015 and omit KPIs relating to water and paper use per employee. This however can be seen as being in line with the recommendations to include disclosures that are material to the company (Global Reporting Initiative, 2013a; International Integrated Reporting Council, 2013), and demonstrates a maturing in the integrated reports produced.

In conclusion, the use of KPIs for integrated reports increased across the sample from 2011 to 2015. However, there is no significant increase for individual companies. The use of KPIs is mixed across the industries, however those companies included in the basic materials sector shows the highest use of KPIs in reporting sustainability disclosures. Companies not using KPIs for reporting act contrary to the recommendations of the <IR> Framework. Most companies do include KPIs in reports relating to other aspects of their businesses. However, the fact that some companies reduced the number of sustainability KPIs they used

seems to indicate that the materiality of disclosures is being considered. We explore this in the next section.

4.3 Material sustainability disclosures

The <IR> Framework (International Integrated Reporting Council, 2013) and the GRI guidelines (Global Reporting Initiative, 2013a) include materiality as a guiding principle in determining which disclosures to include in reporting.

Each integrated report in the sample was therefore evaluated to determine whether disclosures are material to the company (coded as 1), or immaterial to the nature of their business (coded as 0). This classification was inherently subjective and was based on the industry in which the company operates, and relative to other companies included in the sample.

The inclusion of material sustainability disclosures in 2011 and 2015 is presented in Figure 7. Figure 8 and Figure 9 illustrate the materiality of sustainability disclosures by industry, for 2011 and 2015.

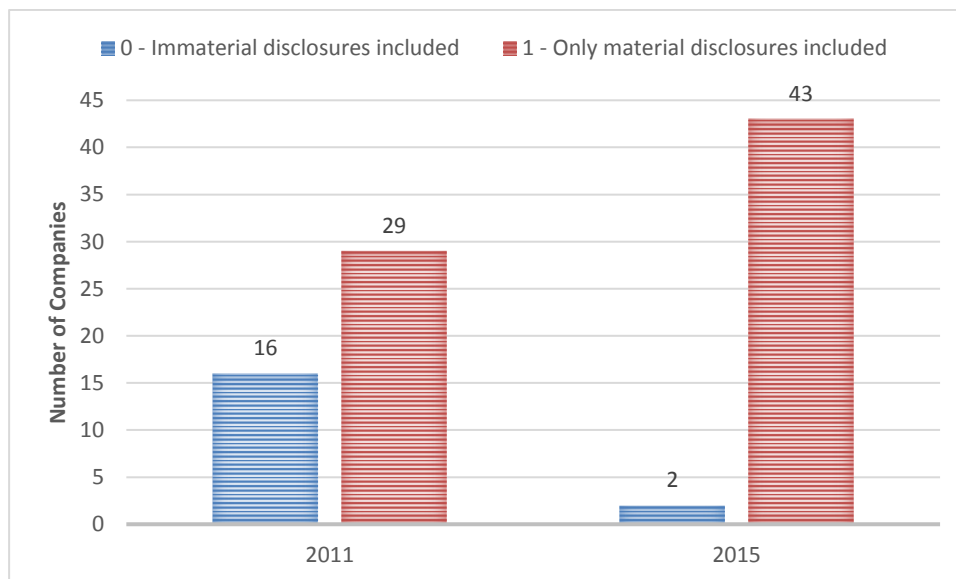


Figure 7 Inclusion of material sustainability disclosures within integrated reports

In 2011 most companies included only material disclosures, and this increased dramatically in 2015, to 43 of the 45 sampled companies. This is in line with expectations, because the 2015 integrated reports were prepared with guidance from the Integrated Reporting Framework and the G4 guidelines both of which emphasise the inclusion of only material items (Global Reporting Initiative, 2013a; International Integrated Reporting Council, 2013).

The sign test was performed to determine if companies demonstrate a significant change in their inclusion of material sustainability disclosures, and this confirmed these findings. The results appear in Table 7.

Sign test for material disclosures	
Number of non-ties	14
Percent 2011 < 2015	100%
Z value	3.47
Z _{0.025}	1.96
p-value	0.000512

Table 7 Sign test - change in material disclosures

The results reveal overwhelming evidence that companies changed their behaviour relating to the disclosure of material items. These companies changed to include only material sustainability disclosures, rather than a broad range of disclosures, which included items that had no relevance to the company, as seen in 2011.

For example, Mediclinic (a healthcare company) included many immaterial disclosures in 2011, including extensive disclosures on local communities and energy usage. In 2015 there were only a few disclosures for these items. Disclosures relating to water and the freedom of association of employees were not considered material in 2015 and were excluded. The disclosure category that included the most disclosures for both years was the customer health and safety category, which is an area key to the survival of their business.

To view this behaviour through the lens of legitimacy theory, in 2011 companies sought legitimacy by complying with the GRI guidelines of the time, G3, which included a long list of disclosures, without the emphasis on materiality (Global Reporting Initiative, 2013a). To increase or maintain their legitimacy companies therefore provided lengthy, and often immaterial, sustainability disclosures. However, with the publication of the Framework and the G4 guidelines, which emphasise material disclosures, companies changed their reporting practices to again maintain their legitimacy.

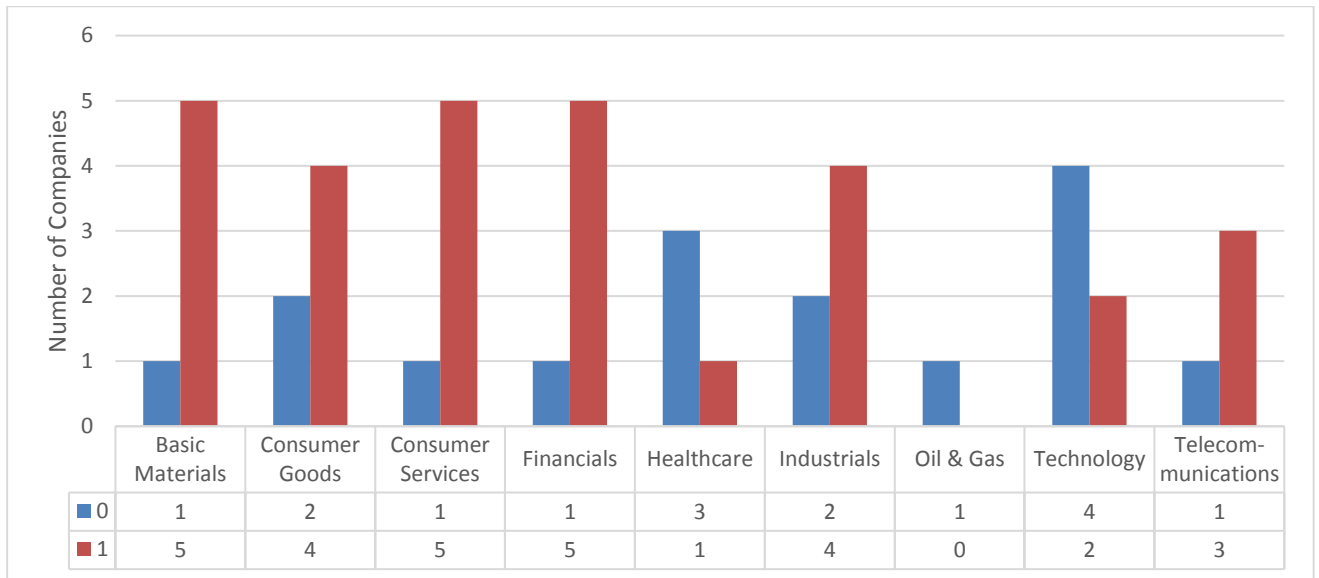


Figure 8 Material sustainability disclosures by industry - 2011

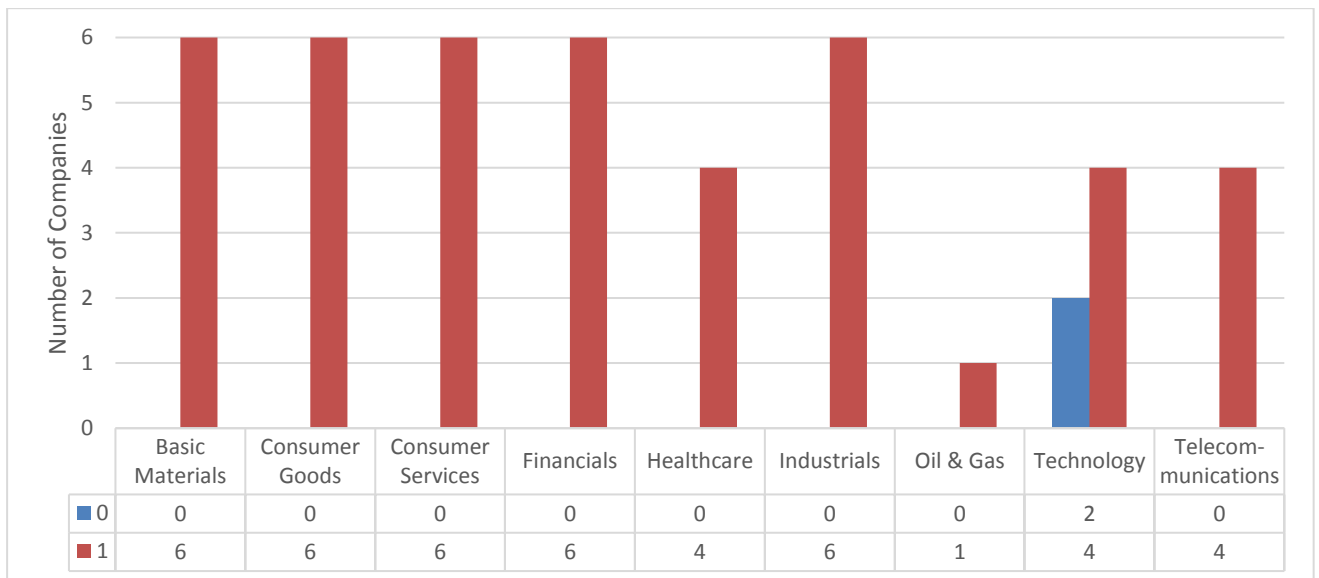


Figure 9 Material sustainability disclosures by industry - 2015

Companies in all industrial sectors included only material disclosures in 2011. However, more companies in the healthcare, oil & gas, and technology sectors include a wide spectrum of disclosures, rather than only material disclosures.

In 2015 companies in these sectors included only material sustainability disclosures. However, two companies in the technology sector still included immaterial disclosures in 2015. This is consistent with the weak sustainability reporting related to integration of sustainability disclosures and the use of KPIs seen in this sector.

Fisher's exact test returned a p-value of 0.455 for 2011 and 0.058 for 2015, showing weak evidence that the industry that a company operates in was significant in 2015, while there was no significance in 2011.

The results of the statistical analyses performed reveal that there was a significant increase between 2011 and 2015 in the number of companies that limited their sustainability disclosures to issues that are material to the company. This is in line with the guiding principle of materiality of the <IR> Framework (International Integrated Reporting Council, 2013). This improvement was seen across all industries except the technology sector.

4.4 Balanced sustainability disclosures

The objective of including only material disclosures does not negate the need for balanced reporting. The literature review revealed that organisations often limit their disclosure of bad news (Adams, 2004; Diouf & Boiral, 2017; Hahn & Lülfs, 2014). However the <IR> Framework includes reliability and completeness as guiding principles, encouraging organisations to disclose both positive and negative items (International Integrated reporting Council, 2013).

Each integrated report was evaluated to determine if the sustainability disclosure presented only positive information on the business (coded as 0), or if negative, or 'bad news', commentary was included (coded as 1).

The results are presented in Figure 10. Figure 11 and Figure 12 show the disclosure of bad news by sector.

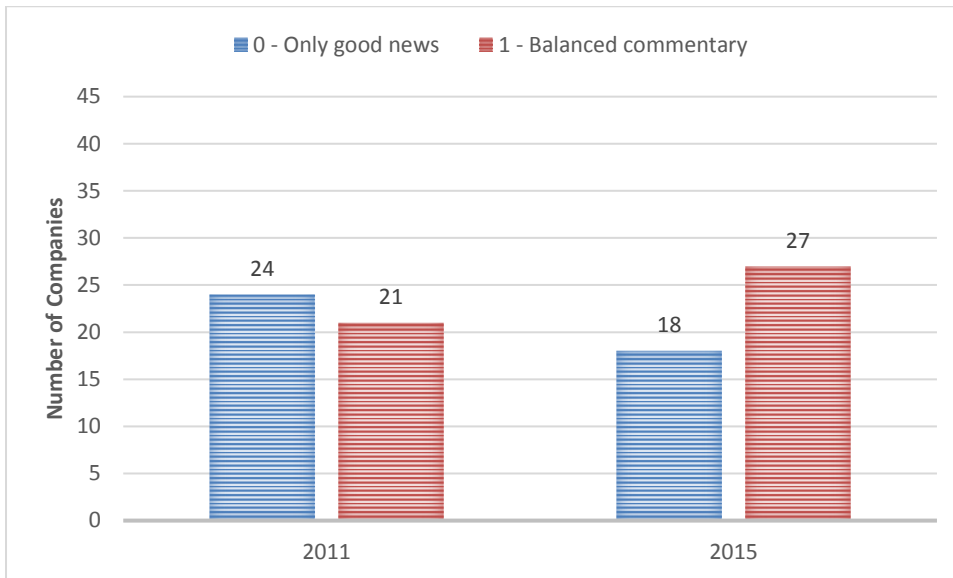


Figure 10 Balance between good and bad news sustainability disclosures

In 2011 slightly more companies excluded bad news in sustainability disclosures in their integrated report. There was a shift in 2015, with an additional six companies including balanced disclosures. However, a significant number of companies still only include positive information, which could be labelled as green-washing (Hahn & Lulfs, 2014).

A sign test was completed to determine if companies presented more balanced reports over the years. Table 8 contains the results.

Sign test for balanced reporting	
Number of non-ties	12
Percent 2011 < 2015	25.0%
Z value	1.44
Z _{0.025}	1.96
p-value	0.149

Table 8 Sign test - change in good vs bad new

The sign test reveals that there was no significant change in the balance of reporting by companies between 2011 and 2015. Of the 45 companies sampled, 33 continued to demonstrate the same behaviour. For the remaining 12 companies there were changes in both directions. This indicates that the inclusion of balanced commentary is related to company specific issues, and the guidance provided by the IIRC and GRI does not influence their disclosure practices.

One company that did show increasingly balanced commentary was AVI (a consumer goods company). Their 2011 integrated report shows very little evidence of balanced commentary, with all of their disclosures being very positive. In 2015, by contrast, some ‘bad news’ disclosures were included. These included discussions on a lower BBBEE rating than prior years, and non-compliance relating to wastewater.

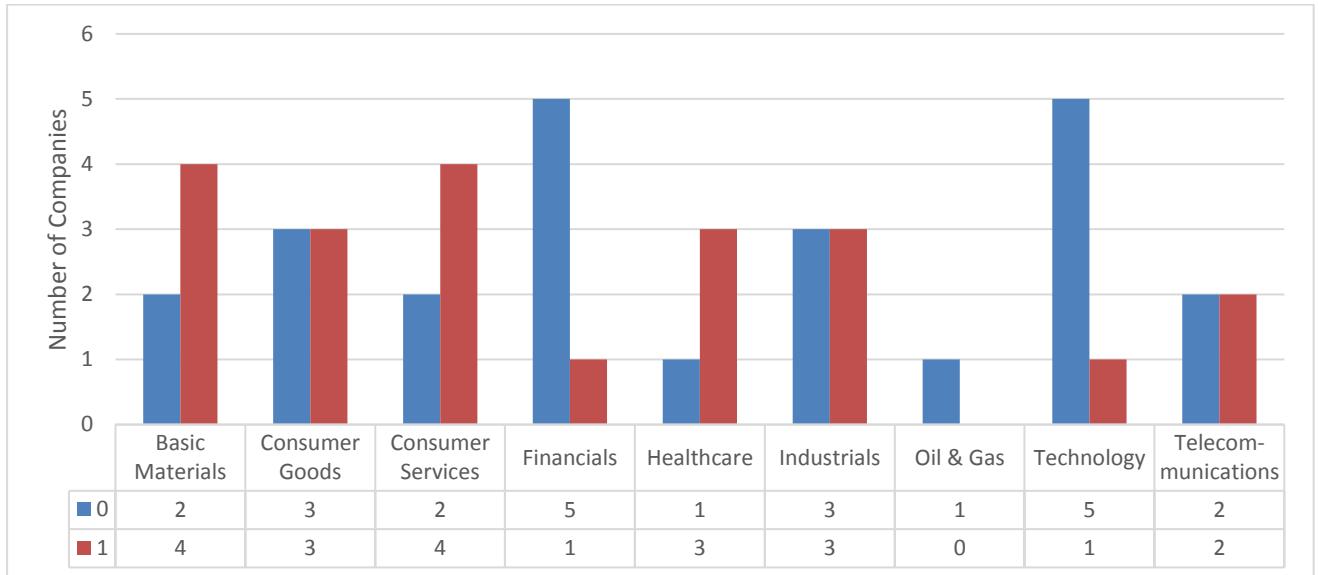


Figure 11 Balance between good and bad news by industry – 2011

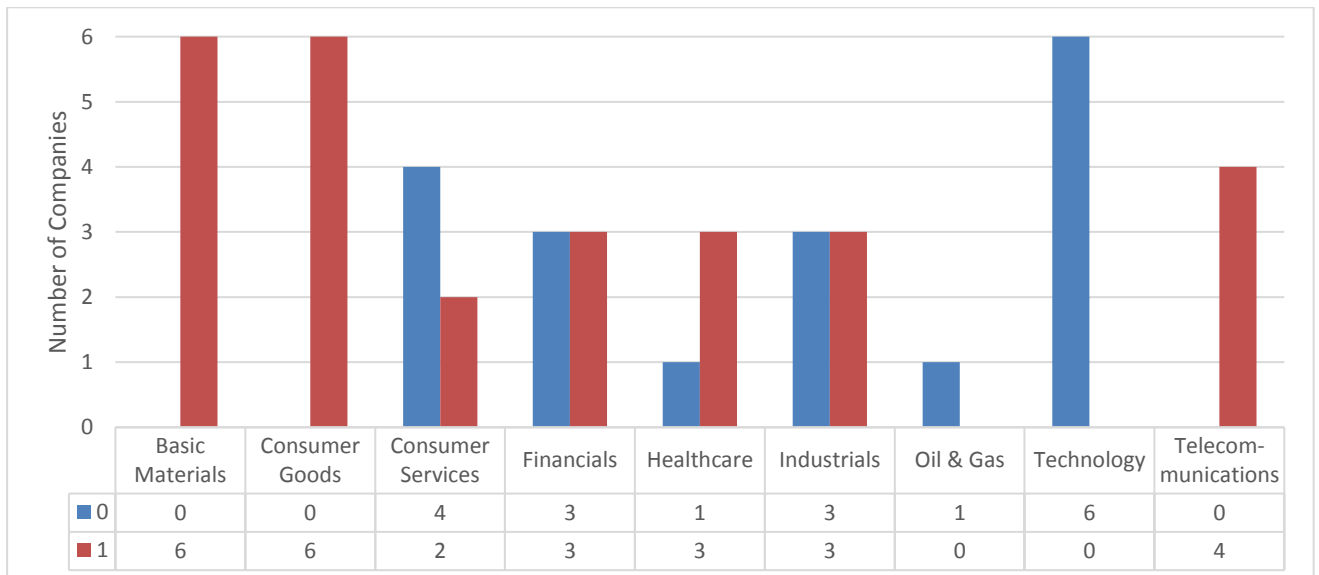


Figure 12 Balance between good and bad news by industry - 2015

Companies in most sectors showed an improvement between 2011, and 2015, most notably those in the basic materials, consumer goods, and telecommunications sectors, where all sampled companies included bad news disclosures.

By contrast, companies in the consumer services and technology industries showed a decrease in the inclusion of bad news disclosures. One possible explanation for this is that companies observed no benefit from presenting bad news, or saw a negative impact from such disclosures, and therefore chose to include only positive disclosures in 2015. However, Hahn and Lulfs (2014) find that companies that choose not to disclose bad news experience a threat to their legitimacy.

Fisher's exact test was performed, and a p-value of 0.463 was obtained for 2011, and 0.0018 for 2015. No evidence was found for the 2011 sample to suggest that industry determined balanced reporting. However, there is strong evidence that this was the case in 2015. This, taken together with the results of the sign test, indicate that balanced reporting is largely influenced by sector practices and issues, rather than broader reporting trends.

There was an increase in the number of companies with balanced sustainability disclosures between 2011 and 2015. However, there is no evidence to suggest that individual companies improved in this regard. The only factor that showed a significant influence on balanced reporting was the industry in which a company operates. This is consistent with legitimacy theory, where companies in sensitive sectors, such as mines, tend to take actions that will improve their legitimacy (Carels, et al., 2013), and Hahn and Lulfs (2014) find that withholding bad news was in fact a threat to a company's legitimacy.

4.5 Number of sustainability disclosures

The preceding sections measured the manner in which sustainability disclosures were included in companies' integrated reports. In this section the number and types of sustainability disclosures will be examined. The disclosures were coded based on the disclosure checklist which is included as Appendix A. This checklist uses the disclosure categories in the GRIs G4 Guidelines as a basis and includes BBEE as a South African specific element.

4.5.1 Number of sustainability disclosures

The histogram in

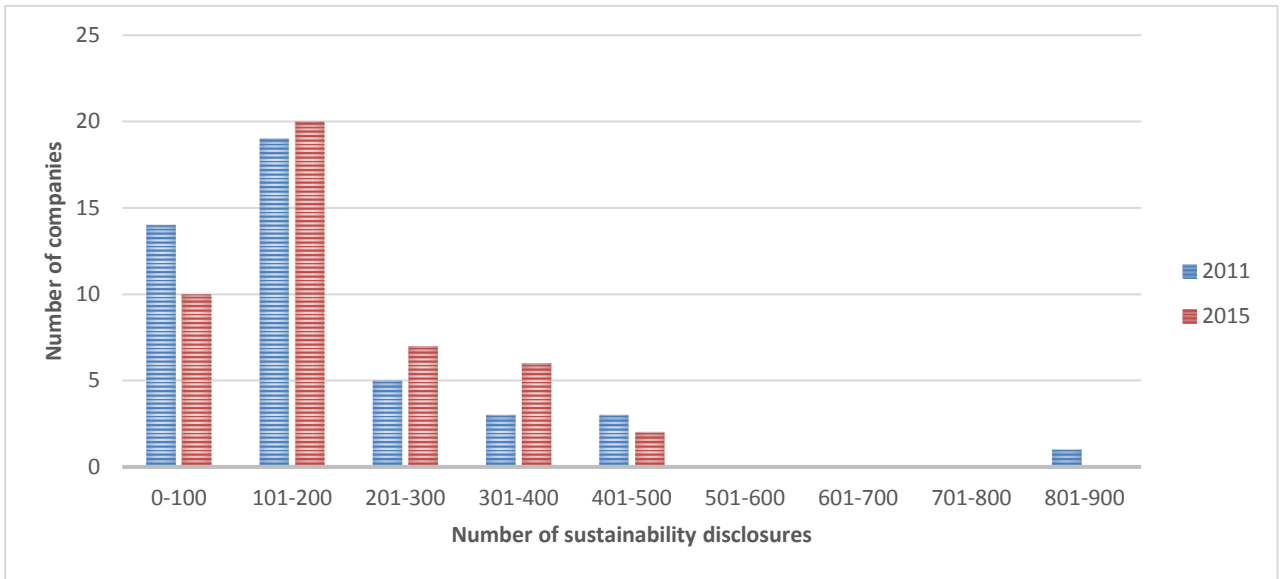


Figure 13 presents total number of disclosures for 2011 and 2015. Table 9 presents descriptive statistics for total sustainability disclosures in 2011 and 2015, and Figure 14 Distribution of total sustainability disclosures presents this information graphically in a box plot.

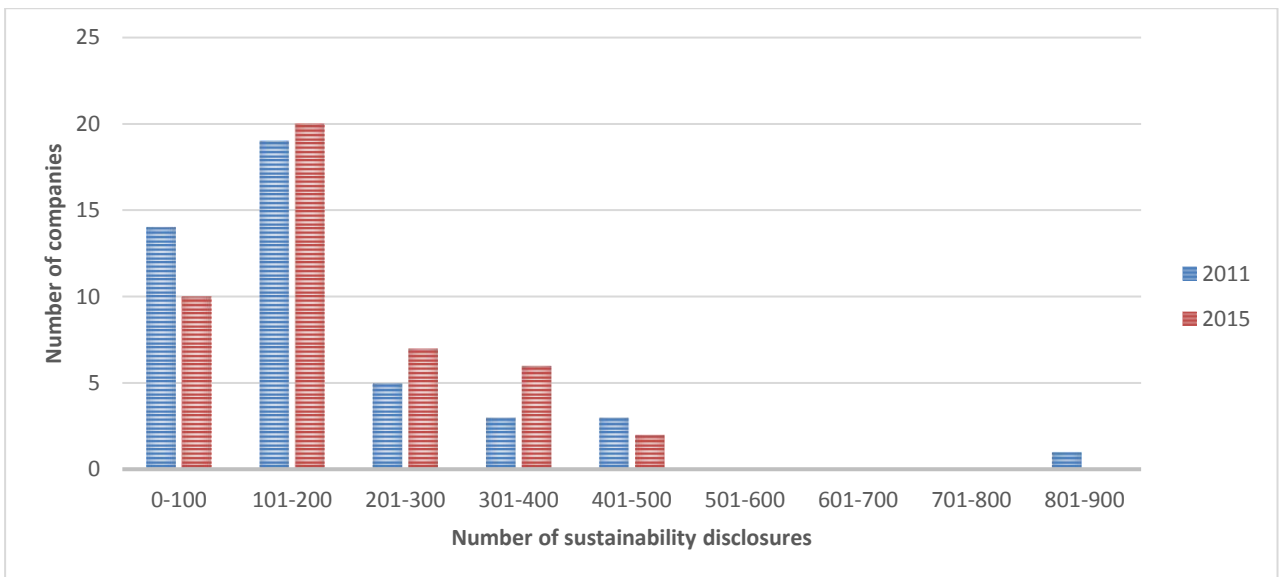


Figure 13 Histogram showing total number of disclosures per company

	2011	2015	% Change
Mean	182.07	183.27	1%
Median	148	163	10%
Standard Deviation	149.33	104.34	
Minimum	3	12	
Maximum	840	495	

Table 9 Descriptive statistics for total sustainability disclosures

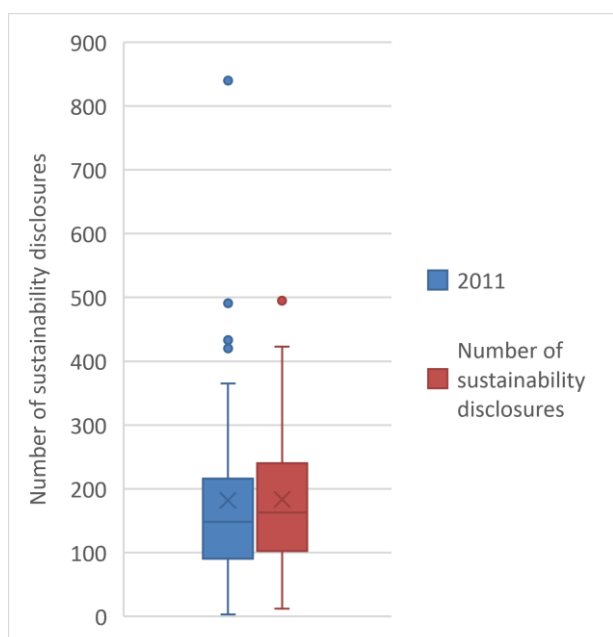


Figure 14 Distribution of total sustainability disclosures

Companies present fewer than 500 disclosures each year, with most falling within the 0-100 and 100-200 sustainability disclosure bands. The exception is Bidvest (an industrials company), with more than 800 disclosures in 2011. The histogram is positively skewed for both years. However, there is a slight increase in disclosures in 2015, shown by the movement from the 0-100 band into the 200-300 and 300-400 bands. However, most companies provided fewer than 200 sustainability disclosures in their integrated reports.

The mean and median increased slightly from 2011 to 2015, with the mean increasing by 1% and the median by 10%. The standard deviation decreased from 149.33 in 2011 to 104.34 in 2015, however the standard deviation in 2011 was influenced by the four outliers.

A paired t-test was performed⁸ to determine if there was a significant difference in the number of disclosures for individual companies between 2011 and 2015. A t-statistic of 0.072 was obtained, compared to the critical value of 1.681. This shows no statistically significant difference in the number of disclosures for a single company, as confirmed by the p-value of 0.943. However, a few companies showed significant changes. For example, Sasol (a basic materials company) included 253 additional sustainability disclosures in 2015. Bidvest (noted as an outlier) included 417 fewer disclosures in 2015. However, the test shows this is not a trend for the entire sample.

⁸ The distribution was found to be normal for both 2011 and 2015.

In total, 19 companies presented fewer disclosures, while 26 companies included more disclosures.

The increase in the total number of disclosures in 2015 may be attributed to companies not including sustainability disclosures, or including them in a separate report in 2011, including these in integrated reports in 2015. Table 10 presents a comparison between the number of disclosures and the extent of inclusion.

Heat map comparing the level of integration to the number of disclosures												
	2011					2015						
Number of sustainability disclosures	801-850	-	-	-	-	1	801-850	-	-	-	-	-
	750-800	-	-	-	-	-	750-800	-	-	-	-	-
	701-750	-	-	-	-	-	701-750	-	-	-	-	-
	651-700	-	-	-	-	-	651-700	-	-	-	-	-
	601-650	-	-	-	-	-	601-650	-	-	-	-	-
	551-600	-	-	-	-	-	551-600	-	-	-	-	-
	501-550	-	-	-	-	-	501-550	-	-	-	-	-
	451-500	-	-	1	-	-	451-500	-	-	-	-	1
	401-450	-	-	-	1	1	401-450	-	-	-	-	1
	351-400	-	-	-	-	1	351-400	-	-	-	-	1
	301-350	1	-	1	-	-	301-350	-	-	-	-	5
	251-300	-	-	1	-	-	251-300	-	-	-	-	2
	201-250	-	-	1	2	1	201-250	-	-	-	-	5
	151-200	-	-	6	1	2	151-200	-	-	1	-	8
	101-150	-	-	7	2	1	101-150	-	-	4	2	5
	51-100	-	1	7	2	2	51-100	-	-	1	1	6
0-50	2	-	-	-	-	0-50	-	1	1	-	-	
	0	1	2	3	4	0	1	2	3	4		
Extent of integration of sustainability disclosures within integrated reports												

Table 10 Heat map comparing the number of sustainability disclosures to the extent of integration of sustainability disclosures in integrated reports

As evidenced by Table 10, in 2011 most companies included their sustainability disclosures as a separate section in their integrated report (code = 2) and included between 51 and 200 separate disclosures. For example, Firststrand (a financials company) included 119 sustainability disclosures in 2011. Of those, 85 were included in the Corporate Governance and Sustainability section of their integrated report. Tiger Brands (a consumer goods company) included most of their sustainability disclosures (117 of their total 149) in the Sustainability and Governance section of their integrated report. The trend of grouping sustainability and governance

disclosures is frequently seen in integrated reports. There was variance in the relationship between the extent of integration and the number of sustainability disclosures for companies that did not include a separate sustainability section. Bidvest, which included 840 sustainability disclosures, did so in a fully integrated manner (code = 4).

In 2015 most companies fully integrated their sustainability disclosures and had between 51 and 350 disclosures. Only those companies that fully integrated their sustainability disclosures exceeded 200 disclosures. In 2015 companies with disclosures exceeding 200 vary in the extent of integration. For example, Imperial (an industrials company) includes 205 sustainability disclosures in 2015. These are included in a number of sections throughout the integrated report. Although a number of companies include a section labelled 'Sustainability' (or an equivalent) in 2015, their sustainability disclosures were not limited to this section, but were integrated throughout the report. These reports were coded as 4. For example, Mr Price (a consumer goods company) include 90 of their total 206 sustainability disclosures in their Sustainability section and an additional 108 disclosures are spread between their Group overview and Strategy and Governance sections.

In 2015 those companies that included sustainability disclosures in a separate section of their reports had between 101 and 150 disclosures. By contrast, in 2011 this group included ten companies with more than 150 disclosures. This indicates that the content of separate sustainability sections in 2015 was limited to material issues (International Integrated Reporting Council, 2013). In confirmation of this, five were rated as having included only material sustainability disclosures in 2015.

4.5.2 Sustainability disclosure categories

Disclosures are disaggregated by the category of the disclosure. The categories were developed from the disclosure categories of the G4 guidelines (Global Reporting Initiative, 2013a), expanded to include BBEE disclosures. Figure 15 presents the descriptive statistics per category for 2011 and 2015 and Figure 16 presents total disclosures per company for 2011 and 2015, by category.

Disclosure category	Measure	2011	2015	% Change
Total	Mean	182.07	183.27	1%
	Median	148	163	
	Std. deviation	149.33	104.34	-30%
	Minimum	3	12	
	Maximum	840	495	
Economic sustainability	Mean	10.04	10.29	2%
	Median	10	9	
	Std. deviation	6.37	7.49	18%
	Minimum	0	0	
	Maximum	24	38	
Environment	Mean	51.80	46.49	-10%
	Median	36	36	
	Std. deviation	54.92	37.75	-31%
	Minimum	0	1	
	Maximum	322	156	
Social: Total	Mean	120.22	126.49	5%
	Median	95	105	
	Std. deviation	95.83	70.24	-27%
	Minimum	3	11	
	Maximum	494	314	
Social: Human rights	Mean	3.36	3.84	15%
	Median	3	3	
	Std. deviation	3.67	3.47	-5%
	Minimum	0	0	
	Maximum	14	17	
Social: Labour practices	Mean	79.62	84.62	6%
	Median	63	67	
	Std. deviation	64.62	49.79	-23%
	Minimum	3	8	
	Maximum	369	209	
Social: Product responsibility	Mean	8.49	9.29	9%
	Median	2	2	
	Std. deviation	23.01	23.03	0%
	Minimum	0	0	
	Maximum	127	136	
Social: Society	Mean	28.76	28.73	0%
	Median	23	28	
	Std. deviation	22.73	16.35	-28%
	Minimum	0	2	
	Maximum	95	97	

Figure 15 Descriptive statistics for sustainability disclosure categories

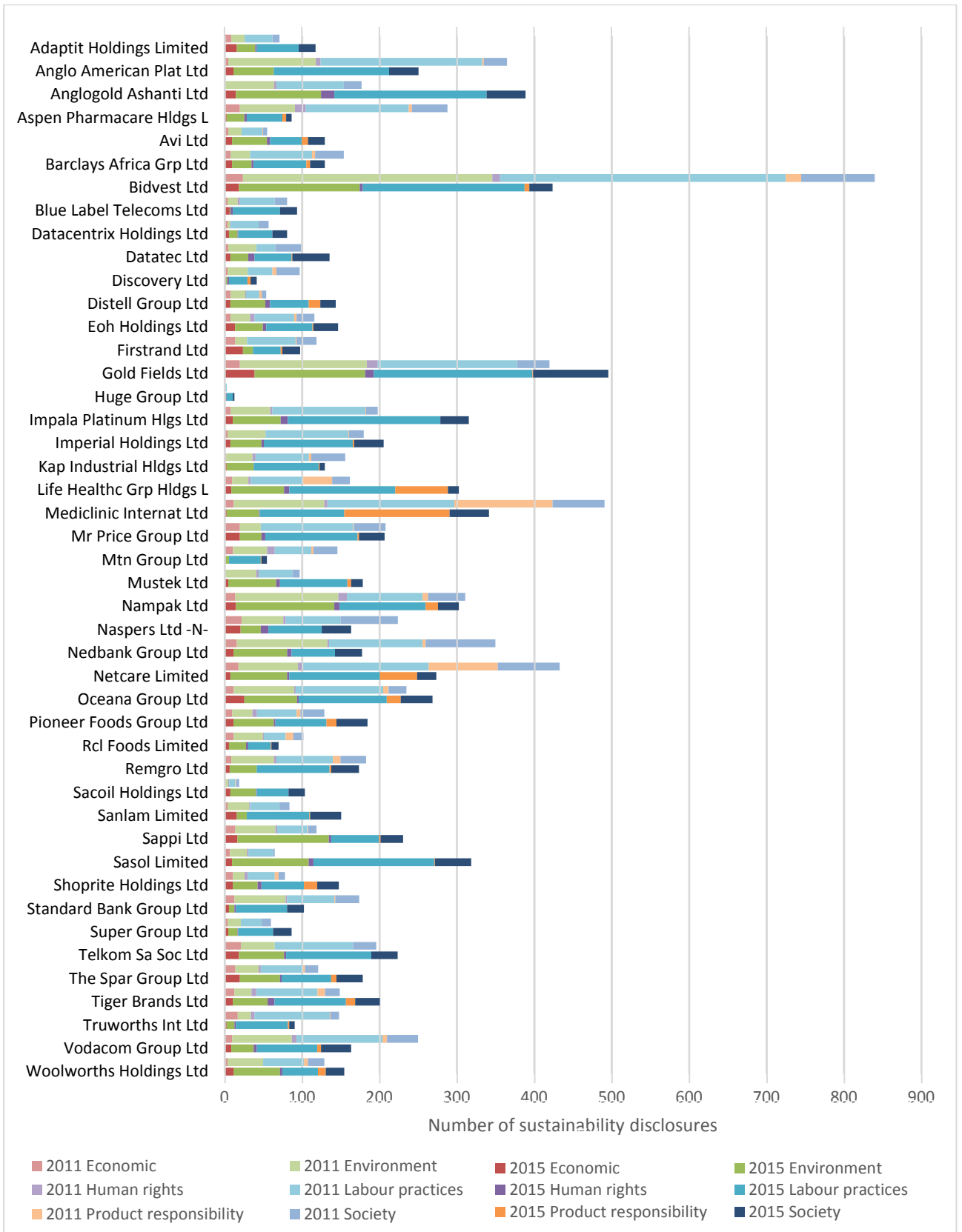


Figure 16 Sustainability disclosures by category and company

In line with the increase in the mean for the total disclosures of 1%, the mean of all categories increased, except for environmental disclosures, which saw a 10% decrease in the number of disclosures. In 2011 many companies presented generic

environmental disclosures, particularly relating to legal compliance, energy usage, emissions, effluents and waste, and water usage. For example, Anglo American Platinum (a basic materials company) include 113 environmental disclosures in 2011. Of those 93 relate to the categories identified. In 2015, they reduced their environmental disclosures to 52 disclosures, and the focus shifted away from compliance, which only had a single mention in 2015. De Villiers and van Staden (2006) find that decreasing environmental disclosures could increase legitimacy, which could be a motivating factor for the companies sampled. This trend also demonstrates that companies adopted the guidance provided by the Framework and G4 requirements released in 2013 to limit disclosures to those that are material.

The trend towards including additional economic sustainability and social disclosures is also consistent with legitimacy theory. In South Africa, the most significant sustainability issues relate to economic growth and social ills (Bentley, 2016). The increased focus by companies on these issues therefore reflects their attempts to increase and validate their legitimacy.

Economic sustainability disclosures are evenly distributed under categories of economic performance, indirect economic impact, and procurement practices. The economic performance category includes disclosures relating to the value added by the company, as well as the economic sustainability of employees through the use of defined benefit retirement plans. The indirect economic impacts category is dominated by references to enterprise development within BBBEE structures. As companies invest in developing other enterprises they enhance the economic sustainability of the economy. Finally, procurement practices are also link strongly to BBBEE, with companies disclosing their preferential procurement practices with companies that have themselves transformed. For example, Adapt IT include the following statement in their 2011 integrated report: “The company is committed to supporting suppliers who are transformed and to improve the procurement of goods and services from small and medium black enterprises as preferred procurement sources.” (Adapt IT Group, 2011, p. 22).

Disclosures in the social category are dominated by those relating to labour practices. The human rights disclosures receive very little attention in either year with a mean of between three and four disclosures per report. The product responsibility

category receives moderate attention, with a slight increase in 2015. These disclosures relate almost exclusively to customer health and safety, or in the case of companies in the healthcare industry to patient health and safety. The society category has the next largest number of disclosures. The disclosure related almost entirely to companies' involvement in their local communities. This was predominantly by way of showcasing the corporate social investment projects of companies. This varies from Nebank's (a financial company) showcasing of an educational programme for underprivileged communities to Sappi (a basic materials company) outlining how their activities create employment opportunities for local communities. A consistent disclosure provided is how much was spent on local communities each year, as companies seek to convince stakeholders that their activities are legitimate because of how they benefit surrounding communities.

The labour practice disclosures within the social category are made up largely by disclosures about employment, occupational health and safety, training and education and diversity and equal opportunity. In South Africa, where unemployment has consistently averaged 25% over the last decade⁹ (Statistics South Africa, 2017) employment is naturally a topic of priority for companies. Labour practice disclosures are often a list of figures relating to the number of employees, the health and safety statistics, the amount spent on training and education, and diversity statistics relating to their employees. Disclosures are often repeated throughout integrated reports. For example, AngloGold Ashanti (a basic materials company) include employee numbers and safety performance statistics for each of their mines.

A paired t-test was performed¹⁰ for each disclosure category, to determine if there is a significant difference in the number of disclosures for individual companies between 2011 and 2015. The results are presented in Table 11.

⁹ Average unemployment was 24.8% in 2011 and 25.4% in 2015.

¹⁰ The distribution for each of the disclosures categories was found to be normal for both 2011 and 2015. The critical value for each test was 1.680.

Paired t-test results		
	t-statistic	p-value
Economic sustainability	-0.229	0.410
Environment	0.887	0.190
Total social	-0.571	0.286
Human rights	-0.721	0.237
Labour practices	-0.714	0.239
Product responsibility	-0.586	0.281
Society	0.006	0.498

Table 11 Results of paired t-test to determine significant difference in number of disclosures per category

The results of the paired t-tests reveal no statistically significant change in the number of disclosures for any category for each company. This suggests that each company assessed its own reporting in each of the disclosure categories, and made adjustments as they deemed fit, rather than according to a general trend. It should be noted again that the purpose of this study is not to determine the quality of the sustainability disclosures, but rather to quantify the number of occurrences. Therefore, although the number of disclosures may not have significantly changed, further research should be undertaken to determine if the quality of these disclosures changes over the period examined.

Although not statistically significant, changes were observed in the distribution of sustainability disclosures between the two periods which indicates a shift in priorities. Taken together with the trend for companies to include more material disclosures in 2015, this indicates that by 2015 companies realise the importance of reporting on social and economic sustainability.

4.5.3 Industry analysis

To better understand the motivations of companies, as well as specific trends, the disclosures are analysed by industry.

Descriptive statistics were performed for the total number of sustainability disclosures, split by industry, as presented in Table 12. In addition, sustainability disclosures were analysed by industry for both years as presented in Figure 17.

Descriptive statistics per industry									
2011	Basic Materials	Consumer Goods	Consumer Services	Financials	Healthcare	Industrials	Oil & Gas	Technology	Telecommunications
Mean	224.00	120.67	151.33	163.00	343.50	288.33	19.00	73.83	168.25
Median	187.5	115.5	138.5	136.5	360.5	181.5	19	84	171
Std Deviation	139.63	67.90	55.32	97.68	148.09	281.90	-	40.64	72.02
Minimum	65	54	78	84	162	60	19	3	81
Maximum	420	235	224	350	491	840	19	116	250
2015	Basic Materials	Consumer Goods	Consumer Services	Financials	Healthcare	Industrials	Oil & Gas	Technology	Telecommunications
Mean	332.67	165.50	156.33	116.00	250.50	219.67	103.00	111.33	133.25
Median	316.5	163.5	158.5	115.5	287.5	189	103	126	128
Std Deviation	97.28	68.10	38.66	47.39	113.15	123.78	-	58.46	74.92
Minimum	230	69	90	41	86	86	103	12	54
Maximum	495	268	206	177	341	423	103	178	223

Table 12 Descriptive statistics - sustainability disclosures by industry

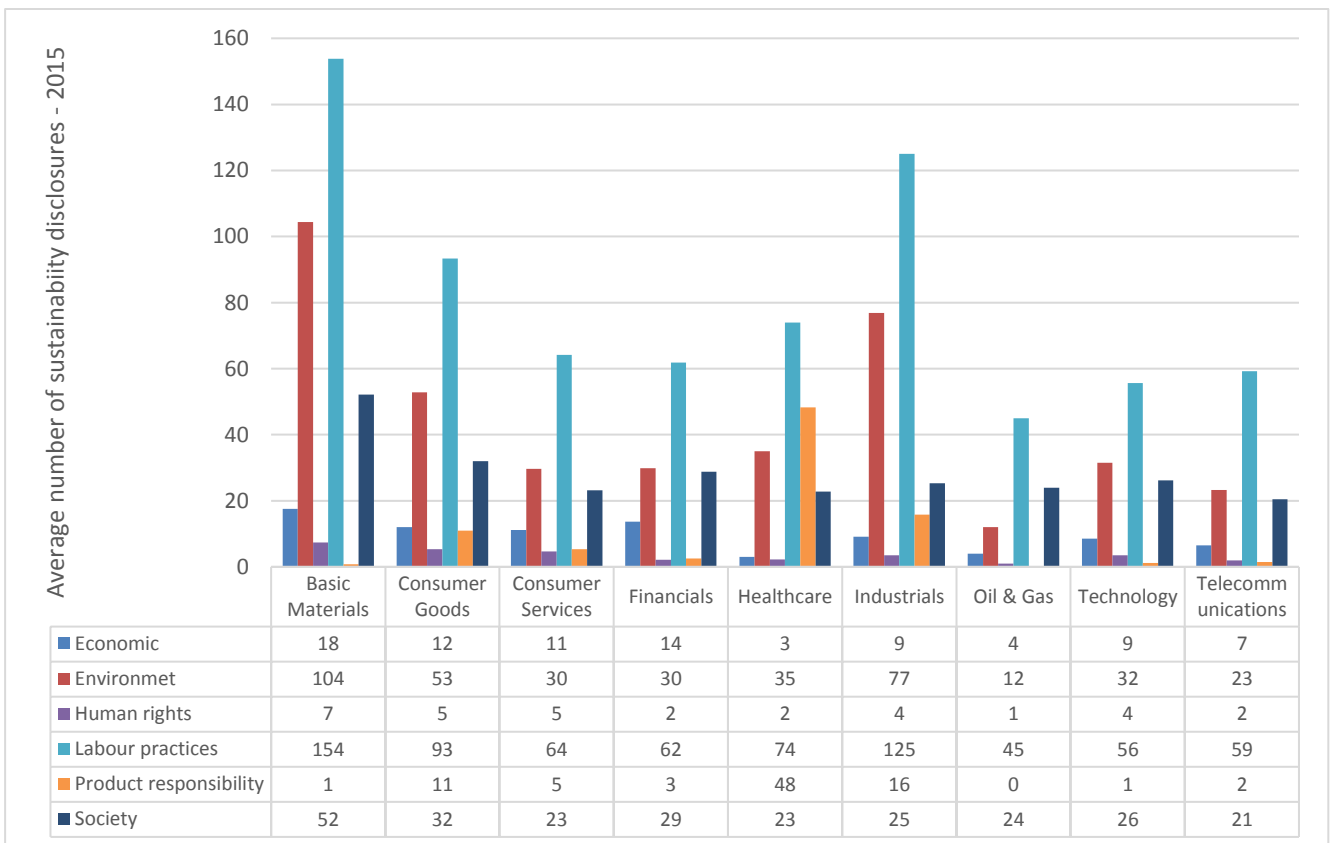
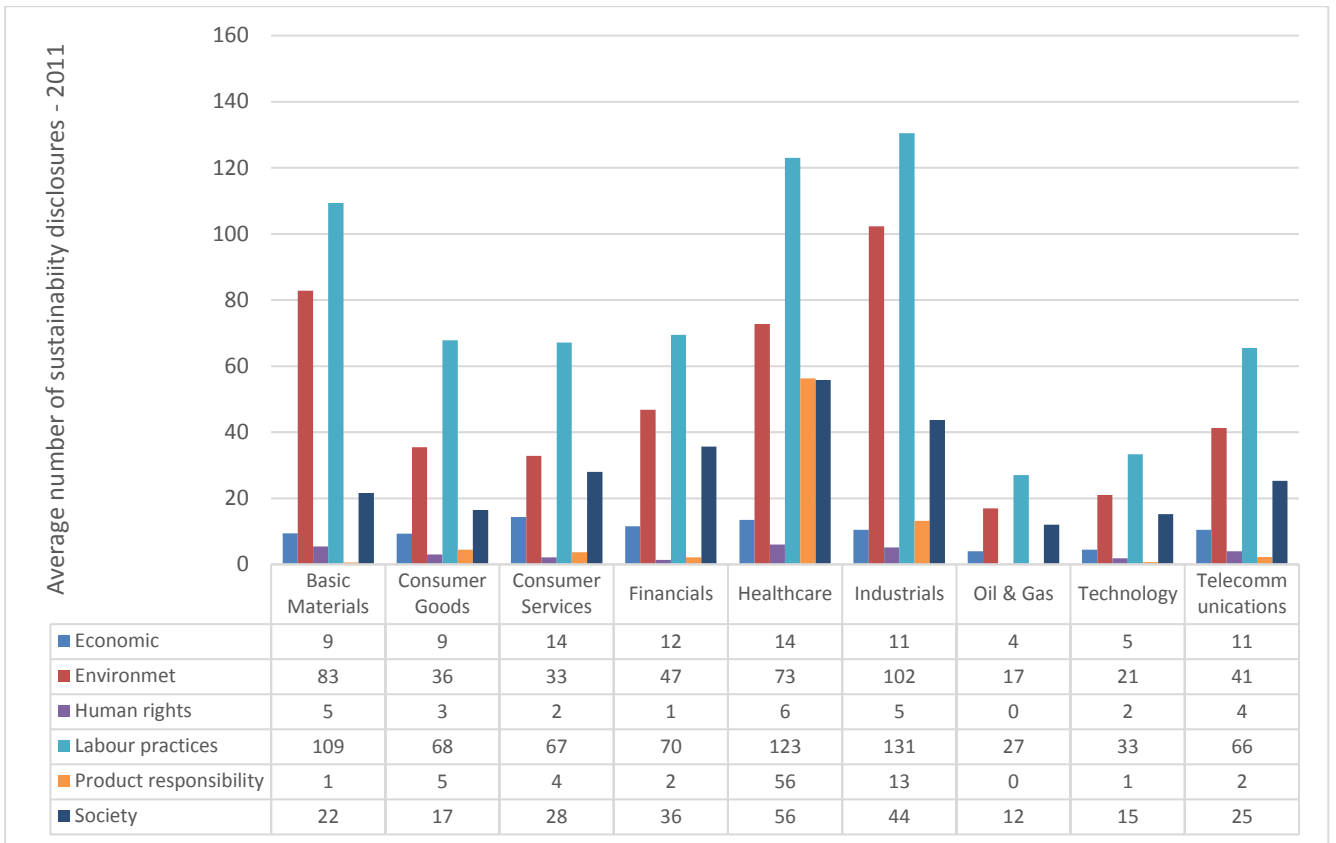


Figure 17 Sustainability disclosures by category and industry classification for 2011 and 2015

The mean varies widely across industries in 2011 and 2015. However, in both years basic materials, healthcare and industrials industries have a significantly higher mean

than other industries. In 2011 companies in these industries either integrated their disclosures or provided these as separate sections in their reports. These companies fully integrated their sustainability disclosures by 2015. This is consistent with the correlation noted earlier between these forms of integration and more sustainability disclosures. This is also consistent with legitimacy theory.

The basic materials industry has a high impact on society, through its workers, their working conditions, and the surrounding communities and the environment. Legitimacy theory therefore predicts that they provide greater disclosures around these areas. Their primary area of disclosure was social issues, and particularly their labour practices. Their labour practice disclosures increase from an average of 109 to 154 disclosures. In 2011 their labour practice disclosures were centred primarily on occupational health and safety (an average of 51 disclosures) and employment (an average of 25 disclosures). In 2015 disclosures in both of these categories increased, and there were more disclosures on training and education. In both years there were an average of 19 disclosures about BBBEE and diversity and equal opportunity, as a result of the Mining Charter, which provides targets and a framework for transformation within the mining industry (Carels, et al., 2013). Environmental disclosures received greater attention, from 83 to 104 disclosures between 2011 and 2015. The focus of these disclosures was primarily on energy and water usage, emissions, and compliance with environmental laws. The increase in society disclosures resulted almost entirely from an increase in disclosures related to local communities.

The healthcare sector is also a high-impact sector. Companies in this sector include private hospital and pharmaceutical groups, which operate businesses where human lives are affected. This is evidenced by the fact that most disclosures related to patient health and safety (within product responsibility). The second highest category was general employment disclosures, followed by staff training and education, which is also key in maintaining high standards of patient health and safety. Their environmental disclosures centred around emissions, and energy and water usage. However, consistent with the trend observed in 2015 to focus on material disclosures, they decreased their environmental and society disclosures, while maintaining their focus on patient health and safety and labour practices.

Another high-impact sector is the industrials industry. This is characterised by companies that employ large numbers of staff, often have occupational health and safety hazards, and have a large environmental impact. In both years these companies' disclosures relating to employment and training and education were dominant. There was a slight change between the two years, with 2011 seeing higher training and education and 2015 higher employment disclosures. Disclosures relating to occupational health and safety also decreased between the two years. It is evident from the dominance of these disclosures that the staff of industrial companies are considered key to their success. The environmental disclosures include information relating to energy, emissions and water, as seen in the other industries mentioned. However, in addition there were significant disclosures relating to effluents and waste. Industrial companies have the most disclosures relating to waste. The society disclosures related almost entirely to disclosures on local communities, but these decreased between the two periods.

Companies in these three industries need to justify their operations through sustainability disclosures, in order to maintain their legitimacy, because of their large impact on the environment and society. These industries also showed the greatest degree of variation in both years, as seen by the standard deviation. The standard deviation decreased in 2015, with this measure for Industrials decreasing most dramatically from 281.90 to 123.78, although in both years industrials showed the greatest variance in both measures. It should be noted that Bidvest, which was identified as an outlier in terms of the number of disclosures in 2011 is included in the industrials sector, which does distort this result. However, the decrease in the variances between companies suggests that companies are beginning to understand integrated reporting, and specifically how to include sustainability disclosures in their integrated reports.

There is evidence, however, that not all high-impact sectors feel the need to report. Companies in the oil and gas and technology industries consistently include fewer sustainability disclosures than average. It is important to note that only one company, Sacoil, is included in the oil and gas industry, and therefore the results cannot be generalised. Their disclosures relate mainly to energy usage, employment practices and local communities, with a slight increase in all of these categories from 2011 to 2015.

The technology industry is characterised by a lower environmental impact than industries like basic materials, although they do employ a considerable workforce. But occupational health and safety is not a critical concern. It is interesting to note however that the disclosures relating to the local communities exceeded the disclosures for any other disclosure category for 2015, demonstrating their attempts to improve the surrounding communities. However, consistent again with legitimacy theory, these companies tend to disclose less in terms of sustainability because their legitimacy is not threatened, when compared to companies in the basic materials, healthcare or industrials industries.

Companies in the consumer goods, consumer services, financial and telecommunications industries provide disclosures similar in number to the average, which consist primarily of environmental and labour practice disclosures.

It can be concluded that companies operating in industries with considerable environmental and social impact provide more sustainability disclosures, consistent with legitimacy theory. Furthermore, companies in the basic materials, healthcare and industrial sectors changed their sustainability disclosures substantially between the two periods. Basic materials companies increase their disclosures, healthcare and industrial companies decreased their disclosures. However, the shift was to more material disclosures in their integrated reports, which seems to be a positive outcome.

4.6 Sustainability disclosures in management commentary

In this section the 'tone from the top' will be examined. Post, et al. (2002), and Adams and McNicholas (2007) find that companies in which top management are involved in sustainability practices and reporting are more likely to be successful in these endeavours.

The entire integrated report is a commentary by top management on the performance, strategy and value-creation of the organisation. However, the

statements and commentary by management¹¹ of the sampled companies in their separate reports were examined to identify how they addressed sustainability issues. The statements of the chairperson, chief executive officer ('CEO') and chief financial officer ('CFO') were scrutinised and coded as either 0 (no sustainability commentary), 1 (limited sustainability commentary) or 2 (extensive sustainability commentary). As with the other measures in this study, the scoring is inherently subjective, and based on counts of comments included, and in comparison to other companies included in the sample. The results of this coding are shown in

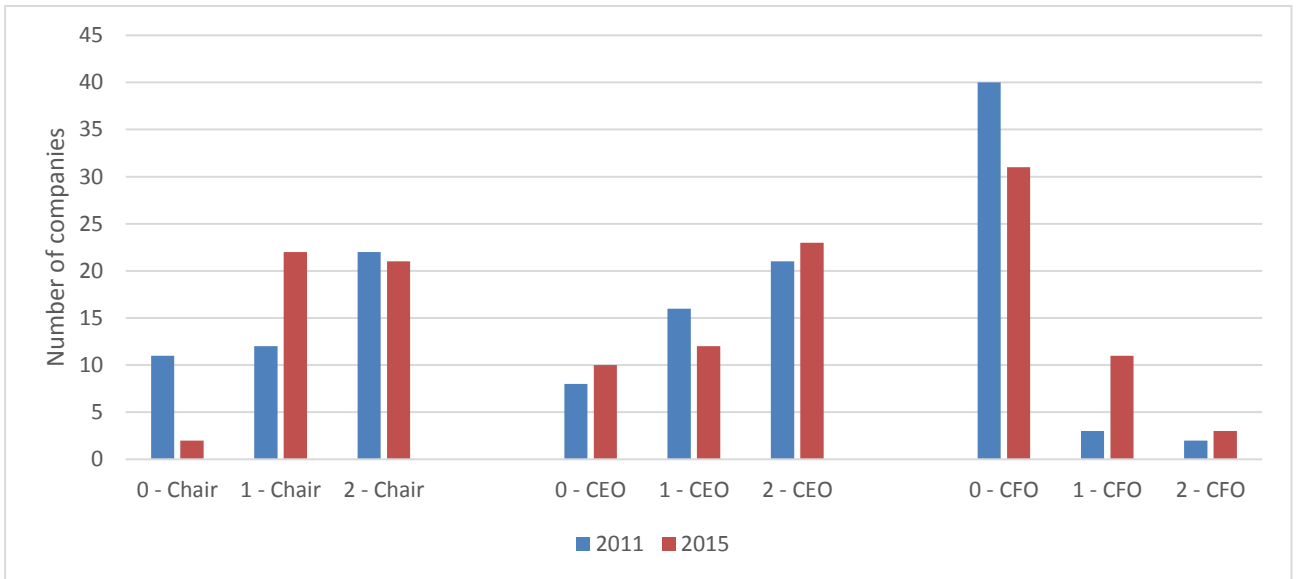


Figure 18, separating observations in the chairperson's report, the CEO's report and the CFO's report.

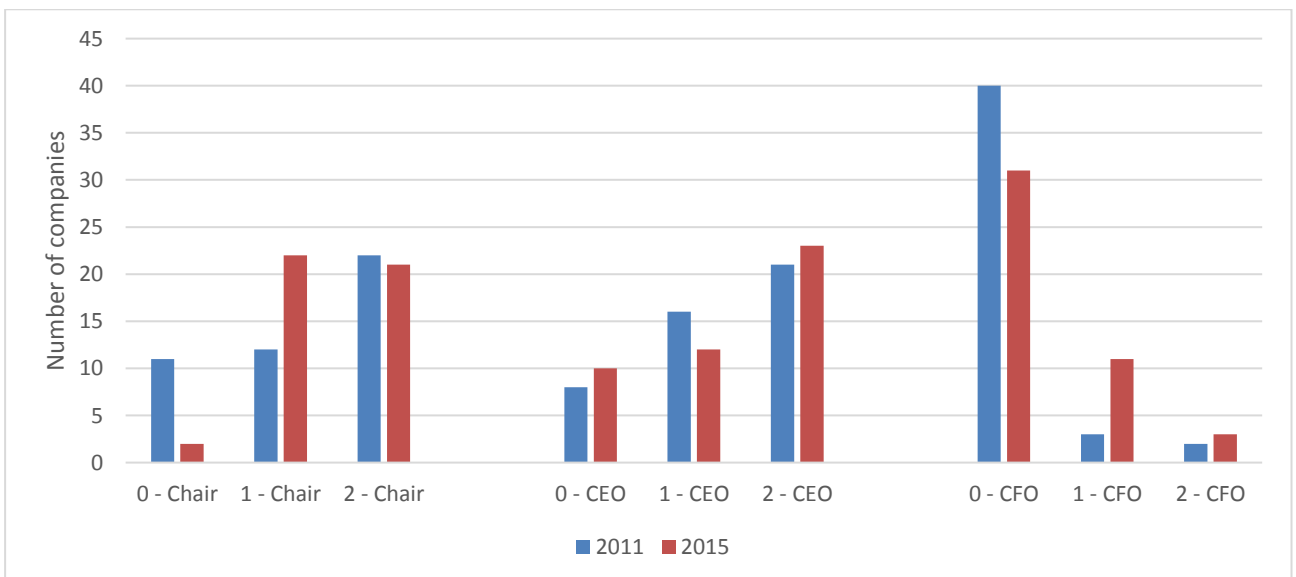


Figure 18 Inclusion of sustainability disclosures in management commentary

¹¹ All references to the term 'management commentary' refer to the separate reports of the chairperson, CEO and CFO.

The results show a trend towards greater discussion of sustainability matters in the commentary provided by managers. This is particularly true for the chairperson's and CFO's report. Both of these reports saw an increase in the number of companies that included some form of sustainability commentary from management.

The chairperson of a company is responsible for providing strategic direction to the board of directors (Institute of Directors of Southern Africa, 2009, 2016). The increase in the number of chairperson's that include sustainability commentary in their reports shows that more companies are considering sustainability as one of their strategic objectives.

There is no clear trend in chief executive officers' reports. There was a slight shift between 2011 and 2015, but some CEOs included more extensive sustainability coverage while some had less coverage. It appears that these are dependent on the CEO and company-specific concerns relating to operations, rather than a general trend. One 2015 integrated report, by EOH (a technology company), included a section titled 'Group CEO's integrated report' in addition to a separate sustainability section. This section covered business performance, operating environment, transformation and social responsibility, and sustainability and corporate governance.

CFO's reports would typically include fewer sustainability disclosures, because their purpose is to provide information on the finances of the company. Not all integrated reports included a report by the CFO, and these reports were given the code of 0. However, those CFOs that did cover sustainability discussed items such as the cost of waste disposal (for example, Anglo Platinum (a basic materials company)) and BBBEE share option schemes (such as Woolworths (a consumer services company)). The CFO of Discovery (a financials company) outlines their approach to reducing operating costs by ensuring that their workforce remained healthy. As a final example, the CFO of Bidvest (an industrials company) includes the following in the report: "To succeed year after year, you need healthy, well-educated employees who travel to work on a functioning transport system, live in sanitary conditions, in comfortable housing and have access to running water and reliable power supplies. For that to happen, government needs sufficient revenue to pay its way and Bidvest is proud of its contribution to this end" (Bidvest, 2015, p. 65). These examples are not

representative, with less than a third of CFOs including sustainability commentary. However, they do demonstrate how sustainability issues can have a financial impact, and if companies are engaged in integrated thinking, these financial impacts should become evident.

We examine what disclosures are included in these reports from management. Table 13 presents the descriptive statistics for the categories of management's sustainability commentary.

Disclosure category	Measure	2011	2015	% Change
Total	Mean	13.78	13.78	0%
	Median	10	10	
	Std. deviation	13.74	12.81	-7%
	Minimum	0	0	
	Maximum	58	75	
Economic sustainability	Mean	0.51	0.93	83%
	Median	0	0	
	Std. deviation	1.06	1.34	26%
	Minimum	0	0	
	Maximum	5	6	
Environment	Mean	3.04	2.67	-12%
	Median	2	1	
	Std. deviation	3.63	4.05	12%
	Minimum	0	0	
	Maximum	18	20	
Social: Total	Mean	10.22	10.18	0%
	Median	7	8	
	Std. deviation	10.93	9.28	-15%
	Minimum	0	0	
	Maximum	47	49	
Social: Human rights	Mean	0.13	0.13	0%
	Median	0	0	
	Std. deviation	0.46	0.34	-25%
	Minimum	0	0	
	Maximum	2	1	
Social: Labour practices	Mean	7.00	7.40	6%
	Median	4	6	
	Std. deviation	8.01	6.50	-19%
	Minimum	0	0	
	Maximum	33	33	
Social: Product responsibility	Mean	0.22	0.31	40%
	Median	0	0	
	Std. deviation	0.67	0.85	26%
	Minimum	0	0	
	Maximum	3	3	
Social: Society	Mean	2.87	2.33	-19%
	Median	2	1	
	Std. deviation	3.24	3.13	-3%
	Minimum	0	0	
	Maximum	14	16	

Table 13 Descriptive statistics for sustainability commentary categories of management

Minimal change is observed between 2011 and 2015 in terms of the categories of sustainability disclosure. Total disclosures in fact had an identical mean in both years, although the standard deviation decreased slightly. The principle areas of

disclosure relate to labour practices, the environment, and society. The disclosures relating to labour practices were spread evenly among those relating to BBBEE, diversity and equal opportunity, employment, occupational health and safety, and training and education. Environmental disclosures related mainly to emissions, energy, and general environmental statements. An example of the latter is the commentary of the CEO of Nedbank (a financials company) which outlines the company's involvement in the 17th global Conference of Parties on climate change in 2011. The society disclosures were focused on activities relating to the local communities. For example, the CEO of Vodacom (a telecommunications company) discusses the activities of the Vodacom Foundation, which uses technology to support health, safety and educational projects in communities.

The average number of sustainability disclosures by category were analysed by industry, as presented in Figure 19. The spread of the disclosures is almost identical to that of total disclosures per category discussed in section 4.5.3, as shown in Figure 17. This indicates that the strategic priorities related to sustainability identified by management are those included in the integrated reports.

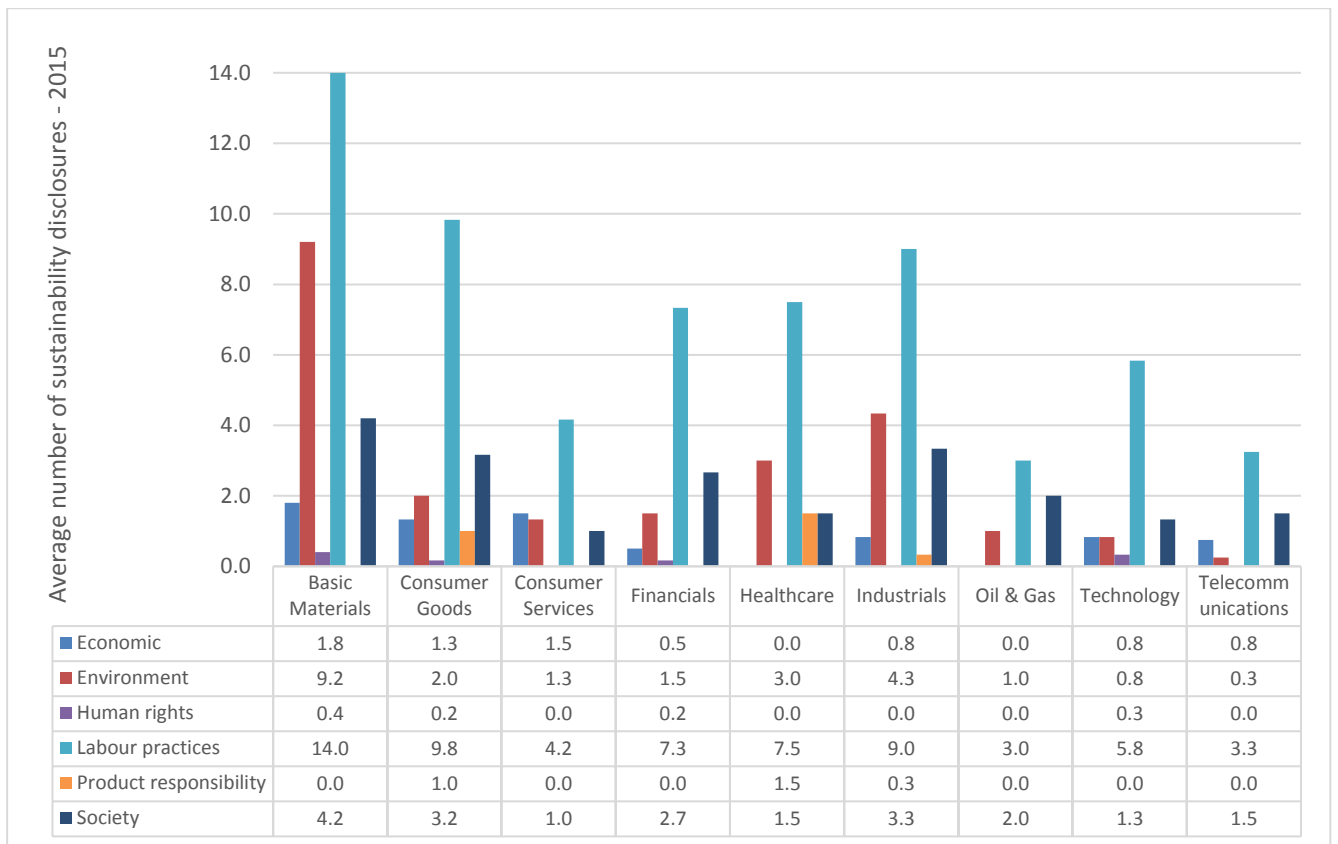
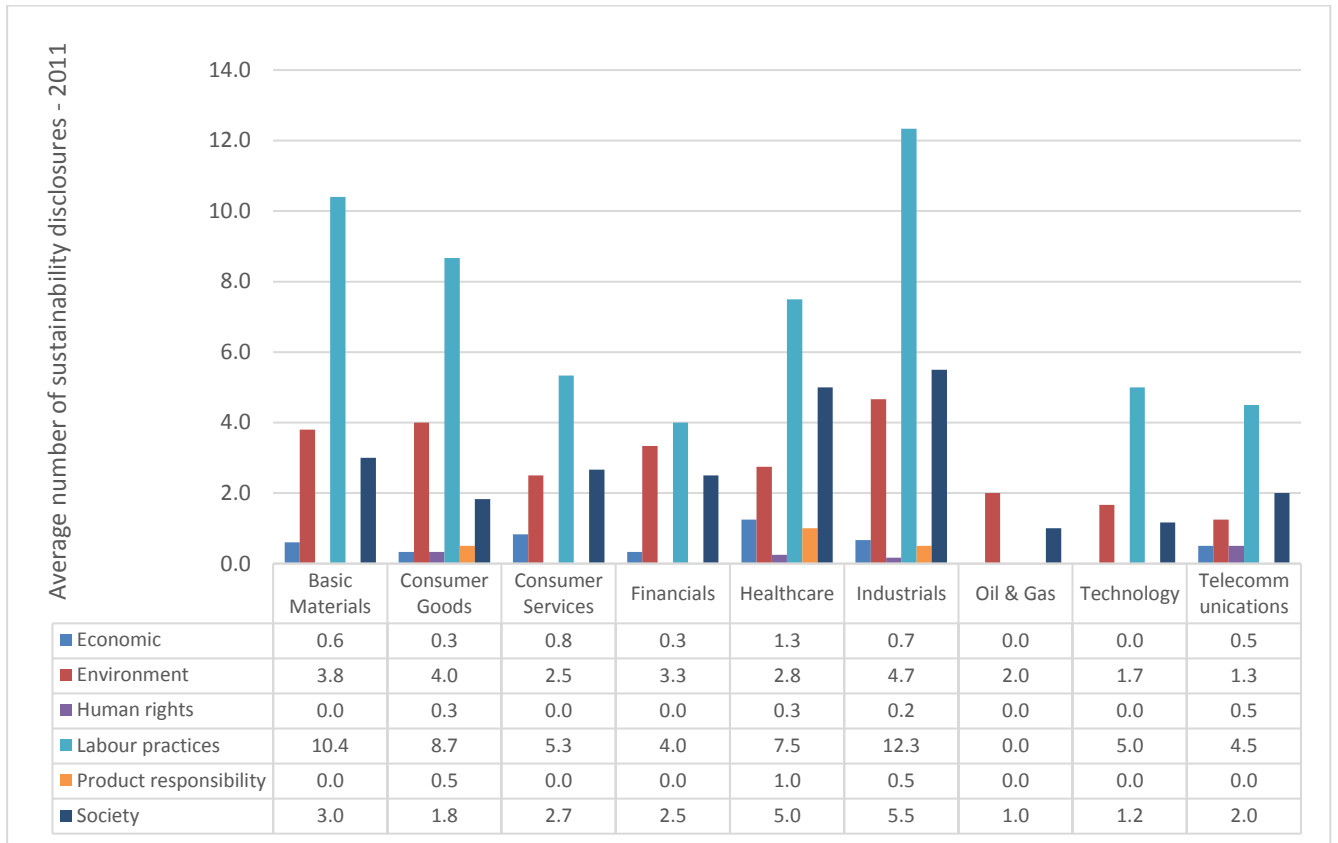


Figure 19 Management's sustainability commentary by category and industry for 2011 and 2015

It is clear that those sustainability areas considered material to the individual companies, and which therefore received the most attention within the integrated reports, are also considered material by the management. The next section discusses the extent of management's sustainability commentary in relation to various other factors previously discussed.

4.7 Overall analysis of trends

This chapter has examined how companies are disclosing sustainability information, and how specific sustainability disclosures are being included in their integrated reports. The relationship among these factors will now be examined by means of a Spearman's correlation test, as well as through a k-means cluster analysis.

4.7.1 Spearman's correlation test

A Spearman's correlation test was performed on the data for 2011 and 2015 to identify correlations between the various measures of sustainability information. The literature finds that size, age and industry of companies are consistently relevant indicators of sustainability reporting practices. Company size and age are included in the Spearman's correlation test, while industry classification is examined separately in the next section. To include management's commentary in the analysis an average score was calculated based on the extent of sustainability disclosures included in the chairperson's, CEO's and CFO's reports.

The results of the Spearman's correlation tests for 2011 and 2015 are presented in Table 14 and Table 15.

	Overall integration	Inclusion of KPIs	Inclusion of material disclosures	Balanced reporting	Inclusion in management commentary	Total number of sustainability disclosures	Total pages in IR	Age	Market capitalisation
2011									
Overall integration	1								
Inclusion of KPIs	.454**	1							
Inclusion of material disclosures	.372*	.208	1						
Balanced reporting	.400**	.303*	.043	1					
Inclusion in management commentary	.427**	.341*	-.061	.481**	1				
Total number of sustainability disclosures	.321*	.540**	-.046	.487**	.432**	1			
Total pages in IR	-.072	.255	-.073	.089	.171	.467**	1		
Age	.444**	.321*	.329*	.100	.186	.273	-.017	1	
Market capitalisation	.146	.409**	.279	.195	.142	.470**	.521**	.371*	1

Table 14. Spearman's correlation coefficient - 2011

	Overall integration	Inclusion of KPIs	Inclusion of material disclosures	Balanced reporting	Inclusion in management commentary	Total number of sustainability disclosures	Total pages in IR	Age	Market capitalisation
2015									
Overall integration	1								
Inclusion of KPIs	.484**	1							
Inclusion of material disclosures	.398**	.199	1						
Balanced reporting	.277	.230	.264	1					
Inclusion in management commentary	.395**	.389**	.252	.497**	1				
Total number of sustainability disclosures	.461**	.392**	.266	.524**	.632**	1			
Total pages in IR	.003	-.220	.249	.192	-.037	.183	1		
Age	.205	.273	.312*	.196	.254	.308*	-.090	1	
Market capitalisation	.137	.162	.332*	.269	.196	.140	.075	.280	1

Table 15. Spearman's correlation coefficient - 2015

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

In 2011 there is a strong correlation between the integration score for companies and their use of KPIs, their reporting on material matters and inclusion of balanced commentary. These measures are taken from the <IR> Framework (International Integrated Reporting Council, 2013). Their correlation indicates that companies applied these principles, even though in 2011 the only guidance available to companies was in King III (Institute of Directors of Southern Africa, 2009). This pattern was repeated in 2015, after the release of the Framework, with the exception of adherence to the principle of balanced reporting. Considering that this is an important guiding principle in the Framework and important for a company's legitimacy (Hahn & Lülfs, 2014), it is disappointing to note non-adherence to this principle. The total number of sustainability disclosures is significantly correlated to the overall extent of integration in both years. This is expected, as companies are required to provide more disclosures to integrate sustainability in integrated reports. However, number of disclosures did not correlate to the materiality of disclosures provided in either year. The total number of disclosures is, however, correlated with balanced reporting in both years. This is also expected, as bad news disclosures would be added to good news disclosures, increasing the total.

The use of KPIs is correlated with the number of sustainability disclosures in both years. That is, extensive use of KPIs is linked to more disclosures. This is likely because the KPI information is often also discussed at length, introducing multiple disclosures.

In both years the extent of inclusion in management commentary is related to the extent of overall integration, the number of sustainability disclosures, and balanced reporting. This indicates that if top management are genuinely involved in sustainability management, sustainability reporting is likely to be more extensive. Furthermore, top management has an incentive to preserve the legitimacy of the company, and therefore reporting will be more balanced.

In 2011 the age of the company was strongly correlated with integration of sustainability disclosures in integrated reports. This suggests that, in the absence of guidelines, companies with established sustainability reporting procedures were better positioned to include these disclosures in their integrated reports. However, in 2015, after the release of the Framework, this correlation is no longer present. At this stage all companies had the advantage of guidance from the Framework, as well as having excellent examples of

integrated reports available, from competitions such as the EY Excellence in Integrated Reporting surveys (EY, 2017).

However, it is important to note that the age of the company is strongly correlated with balanced reporting. This could indicate that more mature companies recognise the importance of balanced reporting, or that newer companies, who are establishing their legitimacy, are reluctant to provide bad news disclosures because it may result in a loss of legitimacy.

Interestingly, the age of the company showed no correlation with the total number of disclosures presented in 2011 but in 2015 older companies presented a larger number of disclosures.

Finally, the size of the company correlates with the use of KPIs, as well as the total number of disclosures and pages in the reports in 2011, but these are not correlated in 2015. In 2015 company size correlated with the materiality of sustainability disclosures. In 2011 larger companies use more KPIs, and produce longer integrated reports, which naturally increased the number of sustainability disclosures. However, in 2015 there was no pattern of larger companies preparing more voluminous integrated reports.

It appears that in 2011, when integrated reporting was a new concept, and there was little guidance on how to prepare reports, older and larger companies had an advantage and could prepare integrated reports that were more integrated in nature in terms of sustainability reporting. However, as companies gained experience, the playing fields have levelled, and there is less correlation between these factors. However, there is a consistently high correlation between the extent of sustainability disclosures by top management and the integration and balance in sustainability reporting.

In the next section these correlations will be explored further using a k-means clustering analysis. Whereas the Spearman's correlation test examines correlations for the entire sample, the k-means cluster analysis allows the correlations observed to be clustered together in meaningful ways to understand the importance of company characteristics.

4.7.2 K-means cluster analysis

A k-means cluster analysis is an analysis run by a computer which groups objects into clusters so that each cluster exhibits similar characteristics for the variables identified for the analysis. For this study each of the variables used in the Spearman's correlation test were included in the analysis.

To perform a k-means cluster analysis the data needs to be standardised, so that each set of data points has a mean of 0 and a standard deviation of 1. This allows data that is of different ranges of absolute values to be compared. Statistica data analysis software was used to standardise the data, and then to perform the k-means cluster analysis. An algorithm was run which grouped the 45 sampled companies into 4 clusters, with the companies included in each cluster having the shortest distance to the cluster mean for each characteristic included in the analysis.

The analysis was conducted for 2011, and then repeated for 2015. The clusters in 2015 differ in nature and composition. However, it is important to determine the changes that occurred between the two periods in order to understand the trends in reporting practice. The resulting 4 clusters for 2011 and 2015 are presented in Figure 20 and Figure 22.

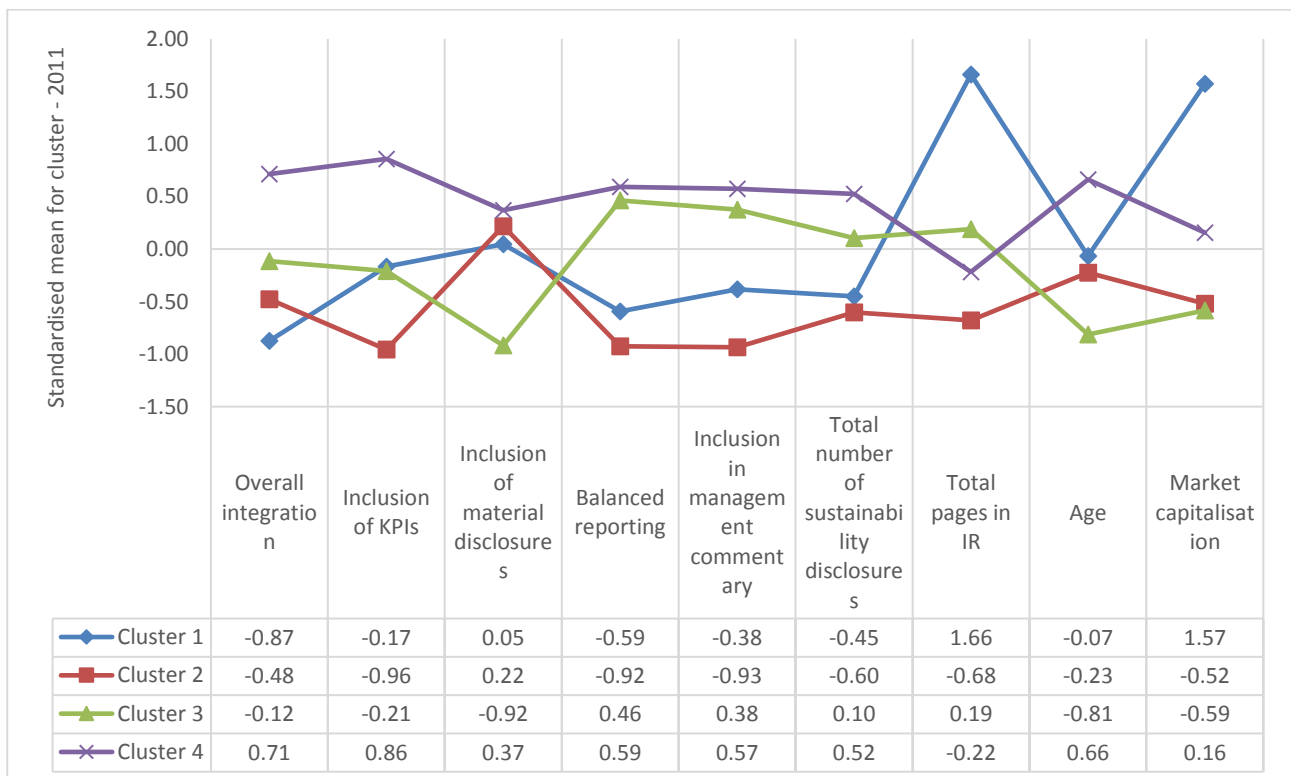


Figure 20 K-means cluster analysis for 2011

For 2011, prior to the release of the <IR> Framework, the algorithm grouped the companies into clusters with the following features:

Cluster 1 – Large companies with extensive integrated reports with little integration of sustainability information

Cluster 1 contains the largest companies in the sample, which typically have the least integrated sustainability disclosures. These companies however restrict their disclosures to those that are material to the company although their reporting is not particularly balanced.

Cluster 2 – Small companies with limited sustainability reporting

Cluster 2 contains a group of small companies that produce the shortest integrated reports. This naturally leads to limited sustainability disclosures, as seen by the lowest total number of disclosures and limited use of KPIs. However, they do limit their sustainability disclosures to issues that are material to the company, although they focus on good news disclosures, and their management does not provide much commentary.

Cluster 3 – Young, small companies providing balanced sustainability reporting

Cluster 3 is made up of the youngest and smallest companies in the sample. Their sustainability disclosures are not fully integrated in their moderate length integrated reports. However, they do provide balanced reporting, and their top management gives sustainability commentary. It is noted though that they do not limit their disclosures to purely material issues, as shown by the above average amount of sustainability disclosures. These young companies appear to be attempting to increase their legitimacy by providing comprehensive sustainability disclosures, but their inexperience leads them to do so in a manner that is not as integrated.

Cluster 4 – Older companies with high levels of integration of sustainability disclosures

Cluster 4 includes the oldest companies in the sample. This maturity has led to the most integrated sustainability reporting. These companies also have the highest average scores for the use of KPIs, materiality and balance, and attention by top management to sustainability issues. In addition, their reports were below average length, which indicates conciseness. These measures were included in the <IR> Framework (International

Integrated Reporting Council, 2013) released two years later. The G4 Guidelines issued in 2013 also included guidance on materiality (Global Reporting Initiative, 2013a). This indicates that mature companies are inclined to report in the way suggested by the Framework and the G4 Guidelines.

Figure 21 presents the clusters for each industry for 2011.

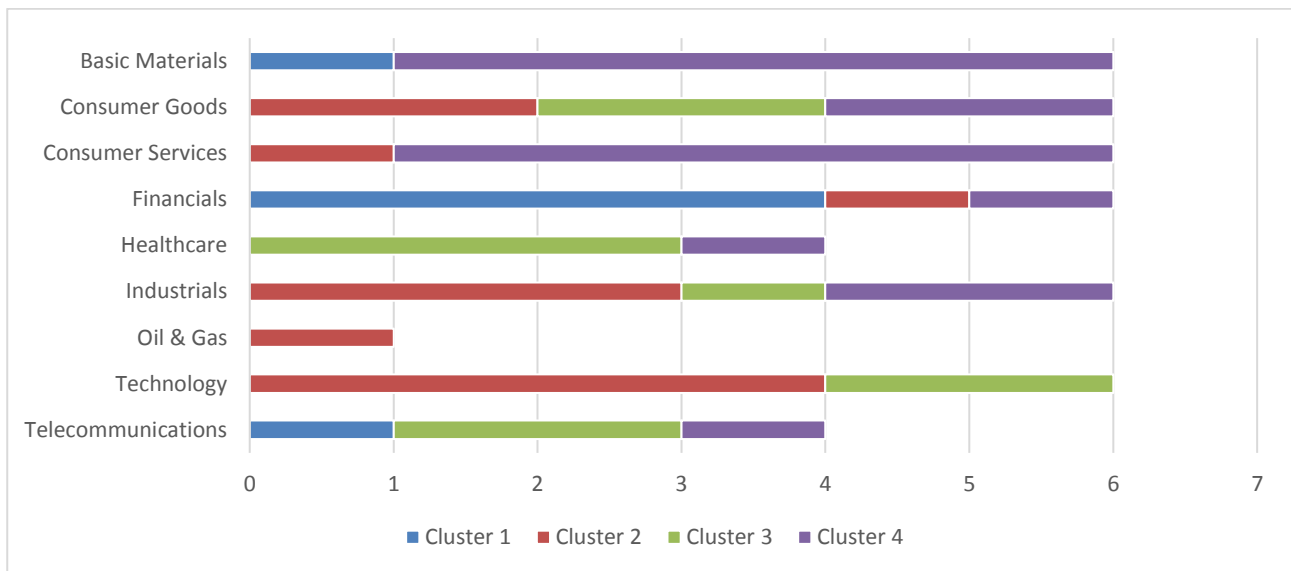


Figure 21 Cluster split per industry - 2011

Cluster 1 is made up primarily of financial companies. They produce long reports, with little integration of sustainability disclosures. Perhaps influenced by the regulatory nature of financial services, their integrated reports are longer, and contain a large amount of regulatory information. Their social and environmental impact is generally low, and there is little controversy about their activities (Kilian & Hennigs, 2014). This results in few sustainability disclosures, either in a separate sustainability section, or in an external report. The focus of top management was also primarily on their operations and risks, with very little mention of sustainability issues.

Cluster 2 is made up mainly of technology companies and the one oil and gas company, and half of the industrials. These companies were characterised as smaller companies with limited sustainability reporting, focused on material issues. Industrials companies have moderate environmental and social impact.

Cluster 3 includes the majority of the healthcare and telecommunication companies, as well as a third of the consumer goods and technology companies. These younger and smaller companies produce average length integrated reports, which include a broad range of sustainability disclosures in a balanced way. The top management consider sustainability to be important, based on their commentary.

Cluster 4 is made up predominantly of basic materials and consumer services companies. Basic materials companies are high impact companies (Carles, Maroun, & Padia, 2013; Dube & Maroun, 2017) and consumer services companies have the public as their customers. These companies exhibit the characteristics in their integrated reporting eventually included in the <IR> Framework released in 2013.

To identify significant change in the clusters, the k-means cluster analysis was again performed for 2015, after the release of the <IR> Framework, and the results are presented in Figure 22. This analysis reveals that the composition of the clusters changed in 2015.

It is clear from an initial examination of Figure 22 that most companies changed how they reported on sustainability in their integrated reports from 2011 to 2015, with the exception of Cluster 3. Company cluster characteristics are discussed in more detail in the next section.

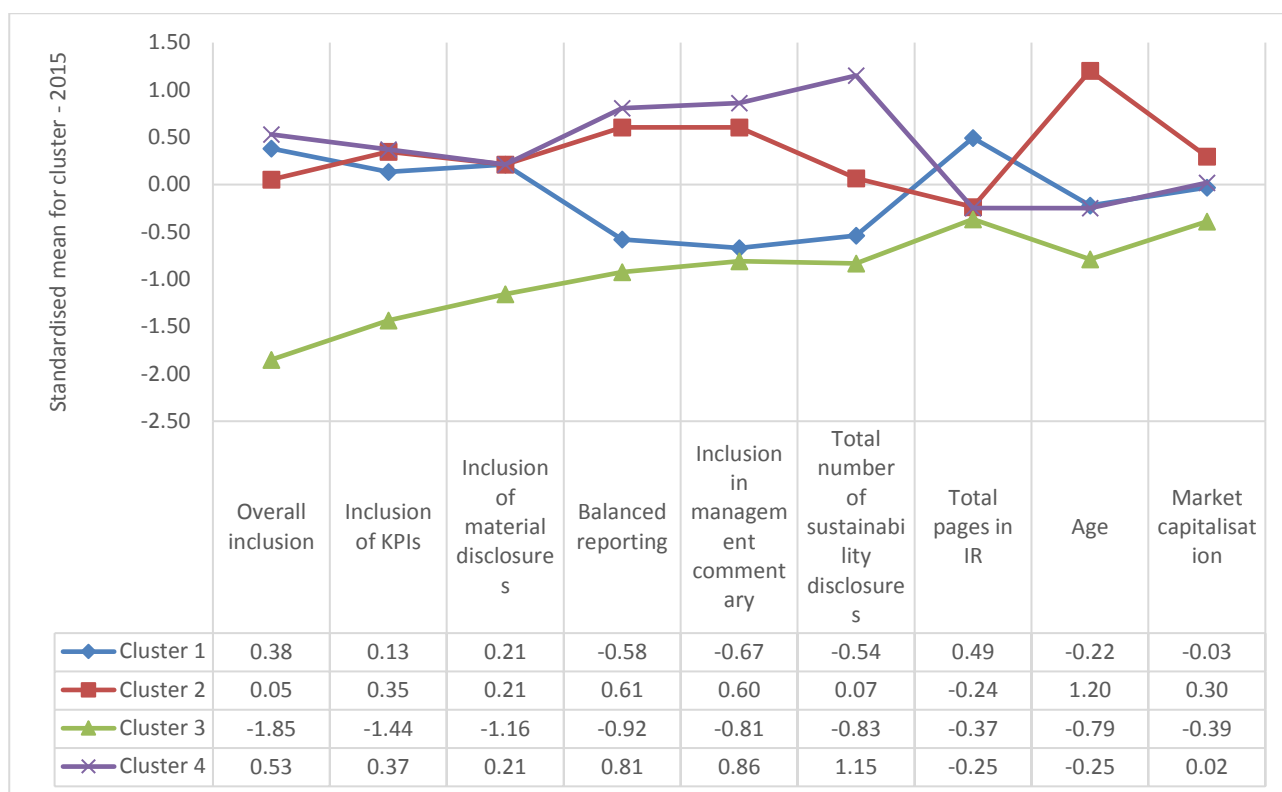


Figure 22 K-means cluster analysis for 2015

The clusters produced by the algorithm for the 2015 k-means cluster analysis had the following characteristics:

Cluster 1 – Companies with long, unbalanced reports

Cluster 1 is characterised by companies of average age and size which produce the longest integrated reports with few sustainability disclosures. Sustainability issues that are included are integrated throughout their report, however they include non-material issues, and management provide limited commentary.

Cluster 2 – Older companies with an average number of sustainability disclosures

Cluster 2, made up of the largest and oldest companies, appears to epitomise the ideals of the <IR> Framework. These companies have short, integrated, balanced disclosures, with fewer disclosures, and use KPIs extensively.

Cluster 3 – Small, young companies with poor sustainability reporting

Cluster 3 is the other extreme. These companies do not integrate their sustainability disclosures, and there is also limited use of KPIs.

Cluster 4 – Companies with extensive sustainability reporting

Similar to Cluster 2, Cluster 4 companies produce excellent integrated reports based on the guidelines provided in the Framework and G4. One significant difference in their reporting style is that they include far more sustainability disclosures in similar length reports. This indicates a greater emphasis on sustainability issues by these companies.

The industry split for each cluster in 2015 is presented in Figure 23.

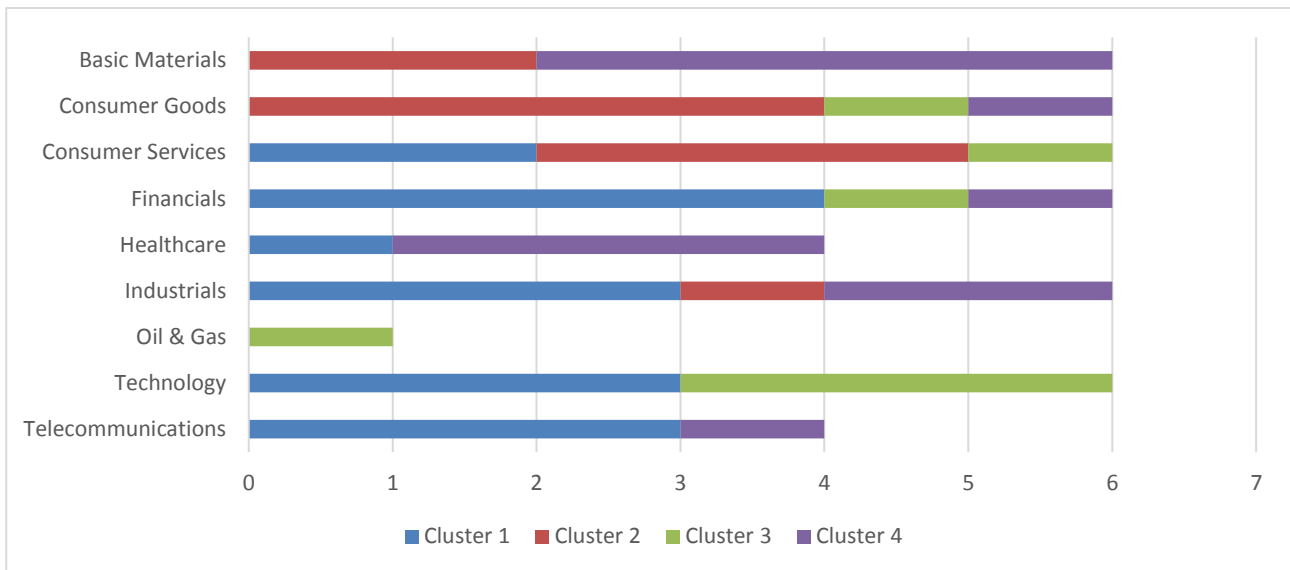


Figure 23 Cluster split per industry – 2015

Basic materials companies again produced excellent integrated reports in 2015 (Cluster 4), but included more sustainability disclosures in 2015. The remainder of the basic materials companies were in Cluster 2, which also demonstrated excellent integrated reporting, but with fewer sustainability disclosures. Basic materials companies continue to exhibit reporting practices that are consistent with legitimacy theory for a high-impact industry, by conforming to reporting norms, and providing detailed, balanced disclosures (Suchman, 1995).

Consumer goods and services companies were predominantly in Cluster 2 and generally present excellent reports. However, they include fewer disclosures than the companies in Cluster 4. This reflects the fact that companies in these industries require the trust of the public in order to operate and need to maintain their corporate legitimacy. However, their environmental and social impact is lower than industries like basic materials, and therefore they provide fewer sustainability disclosures in total. Most consumer services companies

are included in clusters with excellent integrated reporting in both 2011 and 2015. However, an improvement was observed in reports from consumer goods companies between the two periods.

Cluster 1 companies make up most of the financials' sector, but also a significant portion of the industrial, technology and telecommunications sectors. These companies produce reports with integrated sustainability disclosures, but they did not provide many negative disclosures about the companies' sustainability performance or significant management commentary on sustainability issues. These reports were also the longest on average. The performance of companies in the financial sector is similar to that seen in 2011. The industrials and technology industries also present less balanced reporting in 2011, and sparse management commentary on sustainability issues. Companies in the telecommunications industry appear to have regressed in terms of balanced reporting and coverage in management commentary.

The healthcare industry shows the biggest shift in reporting practices. In 2011 their reports are balanced and include extensive immaterial disclosures (2011: Cluster 3). In 2015 most healthcare companies were included in Cluster 4 which adhered most closely to the requirements of the <IR> Framework and the G4 Guidelines.

In 2015, the cluster that adhered the least to the Framework and G4 Guidelines was Cluster 3. The one oil and gas company and half of the technology companies were in this cluster. The cluster that these companies were part of in 2011 was Cluster 2. The main difference between the clusters is that in 2011 these companies included more material sustainability disclosures. These companies are not characterised as having significant threats to their legitimacy however, and therefore do not actively seek to validate their legitimacy with sustainability disclosures in their integrated reports (Maubane et al., 2014).

Having examined how companies include sustainability disclosures within their integrated reports, relative to the guidelines provided by the <IR> Framework and the G4 Guidelines, as well as what disclosures are being included, both in the full reports, as well as in the management commentary, the next chapter will conclude, outline the limitations of this research, and provide areas for further research.

Chapter 5 Conclusion and Recommendations

5.1 Summary of findings

The purpose of this study was to examine the trends in the sustainability reporting in the integrated reports of a selection of JSE-listed companies in a number of sectors.

As discussed in Chapter 2 sustainability reporting arose from recognition of the need for companies to take responsibility for their interactions with the environment and society, in addition to their economic concerns, to ensure they continue operating in the long term (Baumgartner & Ebner, 2010). Sustainability reporting is the mechanism used by organisations to communicate their economic, environmental and social sustainability practices (Global Reporting Initiative, 2013a). Organisations also use sustainability reporting to enhance, validate or repair damage to their legitimacy (Tilling & Tilt, 2010).

Organisations in South Africa were initially guided only by the requirements of the King III Report on Corporate Governance, which encouraged the integration of sustainability disclosures in the integrated report (Institute of Directors of Southern Africa, 2009). However, the International <IR> Framework released in 2013 specified that an integrated report should be prepared for the providers of capital, and disclosures about sustainability issues should be limited to how they affect the organisation's ability to create value in the short, medium and long term (International Integrated Reporting Council, 2013). This apparently contradictory guidance was resolved in 2015 when the IIRC's Corporate Reporting Dialogue endorsed the sustainability reporting guidelines of bodies such as the GRI for the preparation of disclosures on the five capitals, apart from financial capital (Global Reporting Initiative, 2015a).

This study examines the reporting periods of 2011, after the initial release of King III, and 2015, after the publication of the <IR> Framework and the G4 Guidelines of the GRI. 2011 was the first year that companies were required to prepare integrated reports, and they had limited guidance on reporting (Solomon & Maroun, 2012). In contrast, by 2015 the companies had been preparing integrated reports for four years, and there was a multitude of best practice examples available (EY, 2014) and the <IR> Framework guide to consult (International Integrated Reporting Council, 2013).

This study undertook interpretive content analysis of the integrated reports of 45 JSE-listed companies in 2011 and 2015. The results revealed changes in sustainability reporting of these companies.

Chapter 4 presented the findings, showing that there was a significant increase in the integration of sustainability disclosures in integrated reports between 2011 and 2015, across all industries. Furthermore, there was a slight increase in the use of KPIs, although these results were mixed. There was a highly significant change towards including only sustainability disclosures that are material to the organisation. There was also an increase in companies that provided balanced reporting. Finally, the industry in which the companies operated was found to be a significant factor in reporting styles and content.

These results indicate significant progress in the adoption of the guidelines in the Framework. However, no significant change was observed in the content of sustainability disclosures which were included in the integrated reports between 2011 and 2015.

The mean number of sustainability disclosures remained virtually unchanged in 2015, although the manner in which the disclosures were integrated changed significantly. In both years, sustainability disclosures primarily cover labour practices, the environment, and society. Industry made a significant difference in the extent of the sustainability disclosures presented. This is in line with other research (Adams, 2002; Marimon et al., 2012; Maubane et al., 2014; Roberts, 1992).

The literature also indicates that the involvement of top management in sustainability practices and reporting influences the extent and quality of sustainability reporting (Adams, 2002; Adams & McNicholas, 2007; Gray, et al., 1995; Nazari, et al., 2015). This study finds increasing sustainability commentary from top management and similarity between this commentary and sustainability content in these companies' integrated reports. This indicates that there is coherence between the priorities of the top management and the company as a whole.

Findings for 2011 were that older and larger companies had more integrated, balanced, and material reporting. This is consistent with other research that finds that the company size (Adams, 2002; Frías-Aceituno et al., 2013; Roberts, 1992; Wuttichindanon, 2017) and age (Gray et al., 1995; Roberts, 1992) influences sustainability reporting practices.

These results are largely repeated in 2015, with most companies presenting highly material and balanced sustainability disclosures which are well integrated in their integrated reports. This did not apply to the youngest and smallest companies, however.

In conclusion, a trend is observed towards companies integrating sustainability disclosures more effectively in their integrated reports, in line with the guidelines contained in the <IR> Framework. Furthermore, these disclosures are more material and balanced than witnessed in 2011. However, there is no significant trend towards greater use of KPIs for sustainability reporting. Finally, it is apparent that the publication of the <IR> Framework had a significant impact on the sustainability disclosures produced in the integrated reports of JSE-listed companies, with greater compliance witnessed in 2015.

This study contributes comprehensive, hand-collected empirical data showing trends in sustainability disclosures in integrated reports across time, industries and companies. The disclosure content is investigated, as well as the manner in which sustainability disclosures are included in integrated reports, contributing to prior sustainability reporting literature and emerging integrated reporting literature. The data provides insights into how concepts such as materiality from the <IR> Framework and G4 recommendations are being applied the preparation of integrated reports.

5.2 Limitations and areas for further research

This study is exploratory in nature, and the results cannot be generalised to a larger population. The study also made no attempt to evaluate the quality of sustainability disclosures. Furthermore, only 45 companies were included in the sample and the study only examined two years of reporting – 2011 and 2015 – without looking at the intervening years. Examining reports for these intervening years may provide further insight into the trends observed in this study. Finally, interpretive content analysis is highly subjective, and dependent on the interpretation of the researcher. The research was also carried out by a single researcher. These provisos do not, however, prevent the findings from being valid (Leedy & Ormrod, 2015). However, it is important to acknowledge the limitations of such an approach.

This study opens up many avenues of further research. Further studies are required in order to evaluate the quality of sustainability disclosures and the changing trends in quality over the period. The sample could also be expanded to include smaller organisations or public sector entities which prepare integrated reports. The bad news disclosures that were evaluated to a limited extent could be examined in the context of the strategies provided by Hahn and Lülfs (2014). Further studies could also examine the relationship between sustainability reporting and factors such as company share price and profitability which are highlighted as significant in the literature (de Villiers & Marques, 2016; Qiu et al., 2016).

Appendix A

Appendix A is the disclosure checklist compiled using the G4 Guidelines (Global Reporting Initiative, 2013a), and including BBEE, which is a South African specific issue (Johannesburg Stock Exchange Limited, 2014b).

Disclosure Checklist		
Disclosure item or data point to be collected	Code	Key words for word search
Economic	EC	
Economic Performance	EC-EP	Value added/defined benefit
Indirect Economic Impacts	EC-IEI	Indirect economic
Market Presence	EC-MP	Wages
Procurement Practices	EC-PP	Procurement
Other	EC-OTH	
Environmental	EN	
Biodiversity	EN-B	Biodiversity
Compliance	EN-C	Compliance
Environmental Grievance Mechanisms	EN-EGM	Grievance
Emissions	EN-EM	Emissions
Energy	EN-EN	Energy
Effluents and Waste	EN-EW	Waste
Materials	EN-M	Materials
Products and Services (impact mitigation, reclaimed)	EN-PS	Mitigation, reclaim
Supplier Environmental Assessment	EN-SEA	Supplier Assessment
Transport	EN-T	Transport
Water	EN-W	Water
Other	EN-OTH	
Social	SO	
Social: Human Rights	SO-HR	
Assessment	SO-HR-A	Human rights assessment
Child Labour	SO-HR-CL	Child labour
Freedom of Association and Collective Bargaining	SO-HR-FACB	Union
Forced or Compulsory Labour	SO-HR-FCL	Force
Human Rights Grievance Mechanisms	SO-HR-HRGM	*Grievance
Investment	SO-HR-I	clause, *training
Indigenous Rights	SO-HR-IR	Indigenous Rights
Non-discrimination	SO-HR-ND	Non-discrimination
Supplier Human Rights Assessment	SO-HR-SHRA	*Supplier Assessment
Security Practices	SO-HR-SP	Security
Other	SO-HR-OTH	

Social: Labour practices and decent work	SO-LP	
Black Economic Empowerment	SO-LP-BEE	Economic empowerment
Diversity and Equal Opportunity	SO-LP-DEO	Diversity
Employment	SO-LP-E	Employment
Equal Remuneration for Women and Men	SO-LP-ER	Women
HIV/AIDS	SO-LP-HIV	HIV
Labour/Management Relations	SO-LP-LMR	Labour relations
Labour Practices Grievance Mechanisms	SO-LP-LPGM	*Grievance
Occupational Health and Safety	SO-LP-OHS	Health and safety
Supplier Assessment for Labour Practices	SO-LP-SALP	*Supplier assessment
Training and Education	SO-LP-TE	Training
Other	SO-LP-OTH	
Social: Product Responsibility	SO-PR	
Compliance	SO-PR-C	*Compliance
Customer Health and Safety	SO-PR-CHS	*Health and safety
Customer Privacy	SO-PR-CP	Privacy
Marketing Communications	SO-PR-MC	Communications
Product and Service Labelling	SO-PR-PSL	Label*
Other	SO-PR-OTH	
Social: Society	SO-S	
Anti-corruption	SO-S-AC	Corruption
Anti-competitive Behaviour	SO-S-ACB	Anti-competitive
Compliance	SO-S-C	*Compliance
Grievance Mechanisms for Impacts on Society	SO-S-GMIS	*Grievance
Local Communities	SO-S-LC	Communit*
Public Policy	SO-S-PP	Political contribution
Supplier Assessment for Impacts on Society	SO-S-SAIS	*Supplier assessment
Other	SO-S-OTH	
Additional data gathered		
Inclusion (0-4)	OV-INC	
Sustainability KPIs (0-2)	OV-KPI	
IR has material SR items	OV-MAT	
Balance of good/bad news (0/1)	OV-BAL	
Commentary in chairman's report (0-2)	OV-CH	
Commentary in CEOs report (0-2)	OV-CEO	
Commentary in FD's report (0-2)	OV-FD	
Number of pages	OV-PG	

Appendix B

Appendix B is the list of companies included in the sample.

Sample JSE-Listed Companies				
	Code	Name	Industry	Website
1	SOL	Sasol Limited Ltd	Basic Materials	sasol.com
2	AMS	Anglo American Plat Ltd	Basic Materials	angloamericanplatinum.com
3	ANG	Anglogold Ashanti Ltd	Basic Materials	anglogoldashanti.com
4	SAP	Sappi Ltd	Basic Materials	sappi.com
5	GFI	Gold Fields Ltd	Basic Materials	goldfields.com
6	IMP	Impala Platinum Hlgs Ltd	Basic Materials	implats.co.za
7	TBS	Tiger Brands Ltd	Consumer Goods	tigerbrands.com
8	PFG	Pioneer Foods Group Ltd	Consumer Goods	pioneerfoods.co.za
9	DST	Distell Group Ltd	Consumer Goods	distell.co.za
10	AVI	AVI Ltd	Consumer Goods	avi.co.za
11	OCE	Oceana Group Ltd	Consumer Goods	oceana.co.za
12	RCL	RCL Foods Ltd	Consumer Goods	rclfoods.com
13	NPN	Naspers Ltd -N-	Consumer Services	naspers.com
14	WHL	Woolworths Holdings Ltd	Consumer Services	woolworthsholdings.co.za
15	SHP	Shoprite Holdings Ltd	Consumer Services	shopriteholdings.co.za
16	MRP	Mr Price Group Ltd	Consumer Services	mrpricegroup.com
17	TRU	Truworths Int Ltd	Consumer Services	truworthsinternational.com
18	SPP	The Spar Group Ltd	Consumer Services	spar.co.za
19	FSR	Firststrand Ltd	Financials	firststrand.co.za
20	SBK	Standard Bank Group Ltd	Financials	standardbank.com
21	SLM	Sanlam Limited	Financials	sanlam.co.za
22	BGA	Barclays Africa Grp Ltd	Financials	barclaysafrica.com
23	NED	Nedbank Group Ltd	Financials	nedbank.co.za
24	DSY	Discovery Ltd	Financials	discovery.co.za
25	APN	Aspen Pharmacare Hldgs Ltd	Healthcare	aspenpharma.com
26	MDC	Mediclinic International Ltd	Healthcare	mediclinic.co.za
27	NTC	Netcare Limited	Healthcare	netcare.co.za
28	LHC	Life Healthcare Grp Hldgs Ltd	Healthcare	lifehealthcare.co.za
29	REM	Remgro Ltd	Industrials	remgro.com
30	BVT	Bidvest Ltd	Industrials	bidvest.co.za
31	IPL	Imperial Holdings Ltd	Industrials	imperial.co.za
32	NPK	Nampak Ltd	Industrials	nampak.com
33	KAP	Kap Industrial Hldgs Ltd	Industrials	kap.co.za
34	SPG	Super Group Ltd	Industrials	supergroup.co.za
35	SCL	Sacoil Holdings Ltd	Oil & Gas	eforaenergy.com
36	EOH	EOH Holdings Ltd	Technology	eoh.co.za
37	DTC	Datatec Ltd	Technology	datatec.com
38	ADI	Adaptit Holdings Limited	Technology	adaptit.co.za

39	DCT	Datacentrix Holdings Ltd	Technology	datacentrix.co.za
40	MST	Mustek Ltd	Technology	mustek.co.za
41	HUG	Huge Group Ltd	Technology	hugegroup.com
42	MTN	MTN Group Ltd	Telecommunications	mtn.co.za
43	VOD	Vodacom Group Ltd	Telecommunications	vodacom.co.za
44	TKG	Telkom Sa Soc Ltd	Telecommunications	telkom.co.za
45	BLU	Blue Label Telecoms Ltd	Telecommunications	bluelabeltelecoms.co.za

Appendix C

In order to perform the Fisher's Exact test, the categories for the extent of integration of sustainability disclosures must be reduced to two. Appendix C depicts the reclassified data.

Categories defined for the Fisher's Exact Test							
	2011				2015		
	0-2	3-4	Total		0-2	3-4	Total
Basic Materials, Oil & Gas	2	5	7		0	7	7
Consumer Goods	5	1	6		3	3	6
Consumer Services	2	4	6		1	5	6
Financials	6	0	6		1	5	6
Healthcare	3	1	4		0	4	4
Industrials	3	3	6		0	6	6
Technology	4	2	6		3	3	6
Telecommunications	3	1	4		0	4	4
	28	17	45		8	37	45

Table 16 Reclassified data for the purpose of performing a Fisher's Exact test

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