A POLYCHOTOMOUS ACCOUNTABILITY INDEX FOR INTEGRATED REPORTING BY SOUTH AFRICAN LISTED COMPANIES

by

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DECLARATION

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I declare that the above thesis is my own work and that all the sources that I have
used or quoted have been indicated and acknowledged by means of complete
references.

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ABSTRACT

The broad aim of this explanatory sequential mixed-methods study was to extend the extant literature by developing a weighted polychotomous accountability index (PAI) that, in turn, was used to measure and evaluate the extent and quality of integrated annual reports (IARs) prepared by the Johannesburg Stock Exchange (JSE) listed companies for the period 2013 to 2016. The study was motivated by a paucity of research on whether corporate accountability, through corporate reporting, has improved (extent and quality) under integrated reporting (<IR>) through improved integrated reporting quality (IRQ) scores.

The study was conducted in two phases. The first phase was for developing the PAI through the Delphi Inquiry method. In the same phase, through qualitative and quantitative content analysis, the PAI was used to measure and evaluate the extent and quality of IARs for the JSE Top 100 companies over the four-year period (2013–2016). The second phase, in the form of semi-structured interviews, aimed at investigating the factors that contributed to the change in IRQ scores over that period. Eight respondents (preparers of IARs), representing five companies, were interviewed.

Through the Delphi Inquiry method, the PAI was developed (major contribution of the study), which has eight categories, 44 constructs, a total possible score of 152 and a total weight of 100%. Furthermore, the PAI has a six-point ordinal scoring system from 0 to 5. For the IRQ scores, mean annual IRQ scores were computed as 52.45% for 2013, 58.48% for 2014, 64.72% for 2015 and 68.29% for 2016. As for the JSE sectors, the highest IRQ scores were 66.45%, 71.05%, 75% and 81.25% for 2013, 2014, 2015 and 2016 respectively. From an industry perspective, the results showed highest IRQ scores of 66.45%, 72.37%, 70.72% and 62.42% for 2013, 2014, 2015 and 2016 respectively.

The steady increase in the mean IRQ scores for 2013, 2014, 2015 and 2016 shows that there is significant improvement in the extent and quality of IARs produced by the

JSE listed companies. This improvement in the IRQs is due to different reasons, which include: preparers taking <IR> seriously, teamwork, benchmarking, training, experience, addressing stakeholder needs and understanding the principles before implementing <IR>. Moreover, some companies fail to produce quality IARs due to a number of factors that include: an inadequate understanding of <IR> by some preparers of IARs; some entities not seeing value in preparing quality IARs hence they present poor quality IARs; partial buy-in, especially by the executive management; a paucity of skills and resources; outsourcing that was identified as bringing with it poor quality work and some entities preferring to chase prestigious awards at the expense of the company's actual <IR> philosophy, hampering the quality of IARs in the process.

Different conclusions were reached. It was noted that some <IR> concepts and principles should be more synchronised so that they are not in conflict with each other. Rules should be introduced so that <IR> may be a blend of principles and rules as this could minimise preparer judgement. The International Integrated Reporting Council (IIRC) must align its terminology with that of other guideline bodies, such as rating agencies, to give more meaning to <IR>. The IIRC needs to improve <IR> in order to suit companies in the service industry. Integrated reporting has to be more compatible with the digital world and not necessarily paper based. More research must be done about what users need to see in IARs to enhance the relevance of the IAR to different stakeholders.

Furthermore, the IIRC must proactively educate decision-makers for an improved buy-in of <IR>. Pertaining to transformation, de facto and de jure transformation remain merely theoretical without substantial changes on the ground. Government and the JSE should consider the nature of current disincentives since these seem not to sufficiently challenge the current status quo. Finally, more training on capitals and business models should be conducted in order to improve the quality of reporting since these two constructs are perceived to be complex and hence difficult to implement, especially through quantification.

Key words

Corporate accountability, integrated annual report, integrated reporting, integrated reporting quality, preparers, polychotomous accountability index, qualitative factors, stakeholders, stakeholder theory

TSHOBOKANYO

Maikaelelo a a anameng a thutopatlisiso eno e e tlhalosang ya mekgwa e e tswakantsweng ya tatelano e ne e le go atolosa dikwalo tse di gona ka go dira tshupane ya maikarabelo ya *polychotomous* (PAI) e morago e neng ya dirisediwa go lekanyetsa le go sekaseka bogolo le boleng jwa dipegelo tsa ngwaga le ngwaga tse di golaganeng (diIAR) tse di rulaganngwang ke ditlamo tse di kwadisitsweng kwa Johannesburg Stock Exchange (JSE) mo pakeng ya 2013 go fitlha 2016. Thutopatlisiso e rotloeditswe ke tlhaelo ya dipatlisiso tse di malebana le gore a maikarabelo a ditlamo, ka dipegelo tsa ditlamo, a tokafetse (bogolo le boleng) ka fa tlase ga dipegelo tse di golaganeng (<IR>) ka maduo a a tokafatseng a boleng jwa dipegelo tse di golaganeng (IRQ).

Thutopatlisiso e dirilwe ka magato a le mabedi. Legato la ntlha e ne e le la go dira PAI ka mokgwa wa Delphi Inquiry. Mo legatong leo, ka tshekatsheko ya diteng go dirisiwa mokgwa o o lebelelang dipalopalo le o o lebelelang mabaka, go dirisitswe PAI go lekanyetsa le go sekaseka bogolo le boleng wa diIAR tsa ditlamo tse di kwa Godimo tse 100 tsa JSE mo pakeng ya dingwaga tse nne (2013–2016). Legato la bobedi, le le neng le le mo sebopegong sa dipotsolotso tse di batlileng di rulagana, le ne le ikaeletse go batlisisa dintlha tse di tshwaetseng mo diphetogong tsa maduo a IRQ mo pakeng eo. Go botsoloditswe batsibogi ba le robedi (barulaganyi ba diIAR), ba ba emetseng ditlamo di le tlhano.

Ka mokgwa wa Delphi Inquiry, go tlhamilwe PAI (tshwaelo e kgolo ya thutopatlisiso), e e nang le dikarolo tse robedi, ka megopolo e le 44, maduo otlhe a a kgonagalang a 152 le boima jotlhe jwa 100%. Mo godimo ga moo, PAI e na le thulaganyo ya maduo ya dintlha tse thataro go tswa go 0 go ya go 5. Malebana le maduo a IRQ, palogare ya maduo a ngwaga le ngwaga a IRQ, e tlhakanyeditswe go nna 52.45% ka 2013, 58.48% ka 2014, 64.72% ka 2015 le 68.29% ka 2016. Malebana le maphata a JSE gona, maduo a a kwa godimodimo a IRQ e ne e le 66.45%, 71.05%, 75% le 81.25% ka 2013, 2014, 2015 le 2016 ka tatelano eo. Go ya ka indaseteri, dipoelo di bontshitse maduo a a kwa godimodimo a IRQ a 66.45%, 72.37%, 70.72% le 62.42% ka 2013,

2014, 2015 le 2016 ka tatelano eo.

Koketsego ka iketlo ya palogare ya maduo a IRQ a 2013, 2014, 2015 le 2016 e bontsha gore go na le tokafalo e e bonalang mo bogolong le boleng jwa diIAR tse di tlhagisiwang ke ditlamo tse di kwadisitsweng mo JSE. Tokafalo eno ya diIRQ ke ka ntlha ya mabaka a a farologaneng, a a akaretsang: barulaganyi ba tsotelela <IR> thata, tirisanommogo ya setlhopha, go itshwantsha le ba bangwe, katiso, maitemogelo, go samagana le ditlhokego tsa baamegi le go tlhaloganya dintlhatheo pele ga go diragatsa <IR>. Mo godimo ga moo, ditlamo dingwe di palelwa ke go tlhagisa diIAR tsa boleng ka ntlha ya dintlha di le mmalwa tse di akaretsang: go tlhaloganya go go sa lekanang ga <IR> ke barulaganyi bangwe ba diIAR; ditheo dingwe di sa bone boleng jwa go baakanya diIAR tsa boleng mme seo se dira gore di tlhagise diIAR tsa boleng jo bo kwa tlase; tshegetso e e sa lekanang, bogolo segolo ya botsamaisikhuduthamaga; tlhaelo ya bokgoni le ditlamelo; theko ya ditirelo kwa ntle, e leng se se supilweng se tla ka boleng jo bo kwa tlase jwa tiro le ditheo dingwe di tlhopha go lelekisa dikgele tsa mabono mme di ikgatholosa filosofi ya nnete ya <IR> ya setlamo, mme ka go rialo di ama boleng jwa diIAR.

Go fitlheletswe diphitlhelelo tse di farologaneng. Go lemogilwe gore megopolo mengwe le dintlhatheo tsa <IR> di tshwanetse go rulaganngwa ka tsamaisano gore di se ke tsa ganetsana. Go tshwanetse ga itsisewe melanwana gore <IR> e nne motswako wa dintlhatheo le melawana gonne seno se ka fokotsa go atlhola ga barulaganyi. Lekgotla la Boditšhabatšha la Dipegelo tse di Golaganeng (IIRC) le tshwanetse go lepalepanya mareo a lona le a ditheo tse dingwe tse di kaelang, go tshwana le ditheo tse di lekanyetsang, gore <IR> e nne le bokao jo bo oketsegileng. Lekgotla la IIRC le tshwanetse go tokafatsa <IR> gore e siamele ditlamo tse di mo indasetering ya ditirelo. Dipegelo tse di golaganeng di tshwanetse go tsamaelana le lefatshe la dijitale mme e seng fela gore e nne tse di mo dipampiring. Go tshwanetse ga dirwa dipatlisiso tse dingwe malebana le gore badirisi ba tlhoka go bona eng mo diIAR go tokafatsa bomaleba jwa IAR mo baameging ba ba farologaneng.

Go feta foo, lekgotla la IIRC le tshwanetse go ruta batsayaditshwetso gore go nne le tshegetso e e tokafetseng ya <IR>. Malebana le diphetogo, diphetogo tse di gona le tsa tshwanelo e sala go nna tiori fela mme go se na diphetogo tse di bonalang. Puso

le JSE ba tshwanetse go lebelela dintlha tsa ga jaana tse di kgobang marapo ka ntlha ya fa go sa bonale fa di gwetlha seemo sa ga jaana mo go lekaneng. Kwa bokhutlong, go tshwanetse ga dirwa katiso e nngwe ya letlotlo le dikao tsa kgwebo go tokafatsa boleng jwa go dira dipegelo ka ntlha ya fa megopolo eno e mebedi e lebega e le marara mme ka jalo go se bonolo go e diragatsa, bogolo segolo ka dipalo.

Mafoko a botlhokwa

Maikarabelo a ditheo, pegelo ya ngwaga le ngwaga e e golaganeng, dipegelo tse di golaganeng, boleng jwa dipegelo tse di golaganeng, barulaganyi, tshupane ya maikarabelo ya *polychotomous*, dintlha tse di sa lekanyesegeng, baamegi, tiori ya baamegi.

MANWELEDZO

Ndivho khulwane ya ṱhalutshedzo iyi ya ngona yo ṱanganelanaho ya thevhekano ho vha u engedza maṅwalwa a zwino nga u bveledza indekisi ya vhuḓifhinduleli yo khethekanywaho (PAI) ine ya dovha ya, shumiswa u kala na u ela vhuphara na ndeme ya mivhigo ya ṅwaha nga ṅwaha yo ṱanganelanaho (dzi IAR) yo lugiswaho nga vha khamphani dzo ṅwaliswaho kha Johannesburg Stock Exchange (JSE) lwa tshifhinga tsha vhukati ha 2013 u swika 2016. Ngudo dzo ṱuṱuwedzwa nga u shaea ha ṱhoḓisiso dza nga ha uri vhuḓifhinduleli, u mona na u vhiga ha tshiofisi ho no khwiṇisea na (vhuphara na ndeme) nga fhasi ha u vhiga ho ṱanganelanaho (<IR>) nga kha zwikoro zwa ndeme ya u vhiga ho ṱanganelanaho (IRQ).

Ngudo dzo itwa fhethu huvhili nga maga mavhili. Ḽiga ḽa u thoma ḽo vha ḽi ḽa u bveledza PAI nga kha ngona dza Ṱhoḓisiso dza Delphi. Kha ḽiga ḽeneḽo, nga kha musaukanyo wa vhungomu wo sedzaho ndeme na tshivhalo, PAI yo shumiswa u kala na u ela vhuphara na ndeme ya dzi IAR kha khamphani dza 100 dza nṱha dza JSE kha tshifhinga tsha miṅwaha miṋa (2013–2016). Ḽiga ḽa vhuvhili nga tshivhumbeo tsha inthaviwu dzo dzudzanywaho zwiṱuku dzi sengulusaho zwivhumbi zwi dzhenelelaho kha tshanduko ya zwikoro zwa IRQ lwa tshifhinga. Vhafhinduli vha malo (vhadzudzanyi vha dzi IAR), vho imelaho khamphani ṱhanu vho vhudziswa.

Nga kha Ngona ya Ṱhoḓisiso dza Delphi, ho bveledzwa PAI (zwidzheneleli zwihulwane kha ngudo), dzi re na khethekanyo dza malo, miṱalukanyo ya 44, ṱhanganyelo dza zwikoro zwine zwa nga vha hone zwa 152 na ṱhanganyelo ya tshileme ya 100%. Zwiṅwe hafhu, PAI dzi na sisiṱeme ya zwikoro ya odinaḽa zwa phoindi dza rathi u bva kha 0 u swika kha 5. U itela zwikoro zwa IRO, zwikoro zwa vhukati zwa ṅwaha nga ṅwaha zwo rekanywa zwa vha 52.45% nga 2013, 58.48% nga 2014, 64.72% nga 2015 na 68.29% for 2016. Kha sekithara dza JSE, zwikoro zwa nṱhesa zwa IRQ zwo vha zwi 66.45%, 71.05%, 75% na 81.25% nga 2013, 2014, 2015 na 2016 nga u tevhekana. U ya nga kuvhonele kwa nḓowetshumo, mvelelo dzo sumbedza zwikoro zwa nṱhesa zwa IRQ zwa 66.45%, 72.37%, 70.72% na 62.42% nga 2013, 2014, 2015 na 2016 nga u tevhekana.

U gonya zwiṱuku kha zwikoro zwa vhukati zwa IRQ zwa 2013, 2014, 2015 na 2016 zwi sumbedza uri hu na u khwiṋisea hu hulwane kha vhuphara na ndeme ya dzi IAR dzo bveledzwaho vha khamphani dzi re kha JSE. U khwiṋisea uhu ha dzi IRQ ndi nga ṅwambo wa zwiitisi, zwine zwa katela vhadzudzanyi vha dzhielaho <IR> nṱha, u shuma sa thimu, u vhambedza, vhugudisi, tshenzhelo, u livhana na ṱhoḓea dza vhadzheneleli na u pfesesa milayo phanḓa ha musi i tshi shumiswa <IR>. Nṱhani ha izwo, dziṅwe khamphani dzi a kundelwa u bveledzwa dzi IAR nga ṅwambo zwa zwiitisi zwo vhalaho , zwi katelaho u sa pfesea lwo lingaho ha <IR> nga vhaṅwe vhadzudzanyi vha dzi IAR, zwiṅwe zwiimiswa zwi sa vhoni ndeme ya u ita dzi IAR dza ndeme zwa sia vha tshi bvledza dzi IAR dza ndeme i sa takadzi, u zwi ṱanganedza hu si nga mbilu dzoṱhe nga maanḓa vha vhalanguli vhahulwane; u shaea ha zwikili na zwiko; u ṱunḓa tshumelo nnḓa zwine zwo topolwa sa zwi ḓisaho mushumo wa ndeme i sa takadzi na zwiṅwe zwiimiswa zwi tshi funa u gidimisana na pfufho dza maimo hu sa dzhielwi nṱha fiḽosofi ya vhukuma ya <IR> dza khamphani, zwine zwa thivhela ndeme ya dzi IAR kha kuitele kwa zwithu.

Ho swikelelwa khunyeledzo dzo fhambanaho. Ho vhonala uri miṅwe miṱalukanyo ya <IR> na milayo i tea u dzudzanywa u itela uri i sa vhe na khuḓano. Milayo i tea u ḓivhadzwa u itela uri <IR> dzi vha ṱhanganyelo ya milayo na maitele saizwi zwi tshi nga fhungudza khaṱhulo dza vhadzudzanyi. Khoro ya Dzitshakatshaka yo Ṱanganelanaho ya u Vhiga (IIRC) i tea u dzudzanya mathemo ayo na ayo a zwiimiswa nyendedzi, zwi nga ho sa mazhendedzi a u fhima, u ṋea ṱhalutshedzo ya khwiṋe kha <IR>. Vha IIRC vha tea u khwiṋisa <IR> u itela uri dzi elane na nḓowetshumo dza tshumelo. U vhiga ho ṱanganelanaho hu tea u elana vhukuma na ḽifhasi ḽa didzhithala nahone hu sa ḓisendeke nga bammbiri. Hu tea u itwa ṱhoḓisiso nga ha zwine vhashumisi vha vhona kha dzi IAR u khwaṱhisedza u tea ha IAR dza vhashumisani vho fhambanaho.

Dziṅwe hafhu, IIRC i tea u funza vhadzhii vha tsheo lwo khwaṱhaho u itela u khwiṋisa u ḓidzhenisa kha <IR>. Zwi tshi elana na tshanduko, tshanduko ya de facto na ya de jure i sokou dzula i ya thyori hu si na tshanduko dzi vhonalaho ngeno fhasi. Muvhuso na JSE vha tea dzhiela nṱha lushaka lwa sa vha hone ha zwiṱuṱuwedzi saizwi izwi zwi tshi tou nga zwi ṋekedza khaedu lwo linganaho tshiimo tsha zwithu tsha zwino. Tsha u fhedzisela, vhugudisi kha zwiedza zwa pfuma na bindu vhu tea u itwa u itela u

khwiṋisa ndeme ya u vhiga saizwi izwo zwifhaṱo zwivhili zwi tshi vhonala sa zwi konḓaho nahone zwi konḓaho u shumisa, nga maanḓa nga kha u vhekanya ndeme.

Maipfi a ndeme

Vhuḓifhinduleli ha tshiofisi, muvhigo wa ṅwaha nga ṅwaha wo ṱanganelanaho, ndeme ya u vhiga yo ṱanganelanaho, vhadzudzanyi, indekisi ya vhuḓifhinduleli ho khethekanywaho, zwivhumbi zwa ndeme, vhashumisani, thyori ya vhashumisani

CHAPTER 1

INTRODUCTION

1.1 Background information

Trafford and Leshem (2012) identify seven scholarly features that must be reflected on, individually or jointly, in a doctoral study. They argue that the explicit presence of one or two of the seven features represents a discrete characteristic of doctoral research and the establishment of scholarly credentials by association with significant schools of thought in a particular field of study. Therefore, this study examined Integrated Reporting (<IR>), which is a new form of corporate reporting still in its infancy (Trafford & Leshem, 2012:17).

Traditionally, corporate reporting mainly consisted of mandatory disclosures, which include the statement of financial position, statement of profit or loss and other comprehensive income, statement of cash flows, statement of changes in equity, the directors' report and the related notes (Gouws & Cronjé, 2008). In the South African context, the Johannesburg Stock Exchange (JSE) and the Companies Act 71 of 2008, mandate these disclosures. The International Financial Reporting Standards (IFRS), which guide the financial disclosures, are produced by the International Accounting Standards Board (IASB) and are enforced by the above-mentioned legislative bodies. However, financial information has often been criticised for not having sufficient information on matters relating to companies' economic, social and environmental impact on communities (Ayoola & Olasanmi, 2013).

This perceived inadequacy of financial information (Cheng, Green, Conradie, Konishi & Romi, 2014) to inform users about non-financial information led to the growth and development of other reporting systems. Although not all reporting systems are a response to the shortfalls of financial reporting, the fundamental limitations of financial reporting has contributed to the advent of these alternative reporting systems. De Villiers, Rinaldi and Unerman (2014) identify four such frameworks, which are: the Balanced Scorecard (BSC), the Triple Bottom Line (TBL), Sustainability Reporting (SR) and <IR>. Definitions, origins, strengths and weaknesses of these frameworks are elucidated in Chapter 3.

The International Integrated Reporting Council (IIRC) was formed in August 2010 because of the initiative between two leading organisations in the field of sustainability, the Global Reporting Initiative (GRI) and the Prince of Wales' Accounting for Sustainability Project (Flower, 2015). The <IR> framework's main purpose is to "establish Guiding Principles and Content Elements of an Integrated Report, and to explain the concepts that underpin them" (International Integrated Reporting Council [IIRC], 2013). In other words, the <IR> framework provides guidance on the preparation and presentation of integrated annual reports (IARs). The <IR> framework is therefore the authoritative document behind the IIRC's concept of <IR> (Flower, 2015). The IIRC, in performing its mandate, developed the International Integrated Reporting Framework (<IR> framework), which was issued in December 2013.

From 1st of March 2010, all companies listed on the JSE are required to provide an IAR as part of the JSE's listing requirements. From 1 March 2010 to 30 November 2013, JSE listed companies were producing IARs according to their own frameworks and models but they were unsure of what needs to be reported on and how it needs to be reported in order for an IAR to be seen as sufficient. Perceived theoretical consistency in the contents of IARs came with the release of the <IR> framework in December 2013 and its subsequent adoption and enforcement by the JSE as a listing requirement.

Currently, there are many unanswered questions about the degree or extent to which JSE listed companies have implemented the <IR> framework (Adams, 2013b; De Villiers et al., 2014; Cheng et al., 2014; Adams, 2015; Simnett & Huggins, 2015). The study therefore provides insight into the nature, extent and changing levels of <IR> disclosure by establishing an understanding of the practical implementation of the <IR> framework in a South African context. It develops a quality disclosure assessment tool that can be applied to assess and empirically measure the extent to which South African JSE listed companies have been guided by the Guiding Principles and Content Elements of the <IR> framework in preparing and presenting their IARs. Furthermore, the study investigates factors that contributed towards a change in <IR> quality for the period 2013 to 2016 and evaluates whether IARs have improved in terms of quality since they were mandated by the JSE.

1.2 Problem statement

The IIRC (2013:2) declares that <IR> aims to "improve the quality of information available to providers of financial capital to enable a more efficient and productive allocation of capital" while supporters of <IR> claim many internal and external benefits, which lead to better management decision-making. Therefore, the research problem is whether corporate accountability, through corporate reporting, has improved (extent and quality) under <IR> through improved integrated reporting quality (IRQ) scores, as this remains unanswered in the extant literature. Improvement of IRQ is measured against 2013 (baseline year) when <IR> was adopted. Companies have considerable discretion in deciding the level of integration in their integrated reports since <IR> is done on an "apply or explain" basis which means that significant variation is expected in the disclosure quality of <IR> in the sample across companies and years (Zhou, 2014).

Furthermore, the alleged internal and external benefits, which are claimed to accrue from <IR>, have yet to be confirmed via rigorous empirical research. The research problem of this study therefore emanates from a lack of empirical research and understanding in this emerging area of <IR> on the application of the <IR> framework by JSE listed companies and the factors that contributed towards a change in IRQ. The study departs from the extant <IR> literature, which mainly focuses on defining <IR>, defining and explaining the Guiding Principles and Content Elements, and articulating the theoretical advantages of <IR> over other corporate reporting frameworks. This study analyses and evaluates how the <IR> framework's Guiding Principles and Content Elements were adhered to by the JSE listed companies over a period of four years. The study also evaluates the key factors that contributed towards the change (improvement or decline) in IRQ over a period of four years.

Given the absence of detailed research on the application of the <IR> framework (McNally & Maroun, 2018), the study explains this new area of <IR> by empirically evaluating the state and quality of organisational disclosure. The main intention was to deduce how far the JSE listed companies are from full accountability by applying the <IR> framework (Mathews, 1997).

1.3 Research purpose

Creswell (2014) suggests that a study must clearly show its purpose. Therefore, the purpose of this explanatory sequential mixed methods study was to extend the extant literature by developing a weighted polychotomous accountability index (PAI). In the first quantitative phase, PAI data was collected from the companies' websites through the I-Net BFA database in order to establish the extent to which IARs, prepared by the JSE listed companies, are aligned to the <IR> framework. The second qualitative phase was conducted as a follow up to the quantitative results to explain the quantitative results. In this explanatory follow-up, the plan was to explore the factors that contributed towards a change in IRQ by JSE listed companies over the period 2013 to 2016.

1.4 Research objectives

Using South African listed companies as the units of analysis, the objectives of the study were:

Objective 1

- ❖ To develop an extensive weighted polychotomous accountability index to measure the extent and quality of <IR> disclosures by the JSE listed companies.

  Secondary objectives

  - o Construct the Draft PAI from the literature

  - o Assigning weights to the Draft PAI

  - o Validating the Draft PAI through the Delphi Inquiry

Objective 2

- ❖ To investigate the feasibility and practicability of applying the polychotomous accountability index to selected JSE listed companies over the period 2013 to 2016.

  Secondary objectives

  - o Investigate the feasibility and practicability of applying the PAI for

individual companies over a 4 year period

- o Investigate the feasibility and practicability of applying the PAI across the JSE sectors over a 4 year period

- o Investigate the feasibility and practicability of applying the PAI across JSE industries over a four year period.

Objective 3

- ❖ To investigate the factors that contribute towards a change in <IR> quality.

Objective 4

- ❖ To make suggestions and recommendations about <IR> by listed companies in the light of research findings.

1.5 Research questions

The study attempted to address various questions, which are identified below:

- ❖ To what extent do the JSE listed companies apply the <IR> framework? (This complements Objective 2)

- ❖ Has the quality of IARs changed over the period 2013 to 2016? (This complements Objective 2l)

- ❖ What are the factors that have contributed towards a decline/improvement in the quality of IARs? (This complements Objective 3)

- ❖ What are the challenges and limitations faced in the application of the <IR> framework by JSE listed companies? (This complements Objective 4)

1.6 Contribution to the body of knowledge

The study contributes to the body of knowledge by:

- ❖ Identifying a methodology suitable for developing <IR> accountability and a qualitative index. However, the methodology is but a perspective that reflects the quality of IARs and lays a foundation for further development.

- ❖ Constructing a weighted polychotomous accountability index that may be used to measure and evaluate the quality of IARs.

❖ Being one of the early studies to provide empirical evidence regarding the application of the <IR> framework by listed companies.

❖ Identifying the factors that contribute towards an increase/decline of IRQ over a four-year period.

❖ Producing suggestions and recommendations, which have the potential to improve <IR> and accountability by listed companies.

1.7 Research methodology

Figure 1.1 below shows the research design that informed this study. Furthermore, it shows the research methods adopted to achieve the research objectives (and to answer research questions).

As shown in Figure 1.1 below, the study adopted the mixed methods approach, particularly the explanatory sequential mixed methods. The research methods are presented per objective. In achieving Objective 1, the Delphi Inquiry method was used in the development of the weighted polychotomous accountability index. To achieve Objective 2, content analysis was used to investigate the feasibility and practicability of applying the PAI to selected JSE listed companies. To achieve Objective 3, semi-structured interviews were conducted in order to establish the factors that contributed towards a change in IRQ. To achieve Objective 4, deductive inferences (as informed by content analysis and semi-structured interviews) are made in order to develop suggestions and recommendations regarding the use of <IR> by JSE listed companies.

The study intended to develop a weighted polychotomous accountability index in order to measure the quality of IARs before the adoption of the <IR> and after the adoption of the <IR> framework. The main purpose was to investigate whether adoption of the <IR> framework improved the quality of IARs. The IARs for 2013, 2014, 2015 and 2016 were analysed and the IRQ score per year represents the quality of <IR> for those periods. A comparative analysis was conducted to evaluate whether there was an increase or decrease in the quality of <IR> in the four years where 2013 represents the period before adoption of the <IR> framework while 2014, 2015 and 2016 represent the period after adoption of the <IR> framework by the JSE listed

companies. Furthermore, the study establishes factors that contributed towards a change in IRQ.

EXPLANATORY SEQUENTIAL MIXED METHODS
(Quantitative data collection and analysis-Qualitative data collection and analysis-Intrepretation)

OBECTIVE ONE:
To develop an extensive weighted polychotomous accountability index to measure quality of the JSE listed companies' Integrated Annual Reports (IARs).

DELPHI INQUIRY

OBJECTIVE TWO:
To investigate the feasibility and practicability of applying the framework to selected JSE listed companies over the period 2013 to 2016

CONTENT ANALYSIS
Magnitude coding, descriptive coding, focused coding

OBJECTIVE THREE:
To investigate the factors that contribute towards a change in <IR> quality

SEMI-STRUCTURED INTERVIEWS

OBJECTIVE FOUR:
To make suggestions and recommendations about <IR> by listed companies in the light of research findings

DEDUCTIVE INFERENCES
(As understood and interpreted by the author)

Figure 1.1: Research Design and research methods
Source: Researcher

1.8 Limitations

Every study is subject to some limitations, and this one was no exception. One of the limitations was subjectivity in the construction of the polychotomous accountability index (PAI) and in the coding. Well-specified decision categories and well-specified decision rules have lessened coding discrepancies (Milne & Adler, 1999). Furthermore, the iterations in the Delphi Inquiry method were intended to bring reliability and validity to the disclosure index. This was done by a review of the PAI by a panel of experts and ultimately minimising subjectivity.

1.9 Significance of the study

This study is considered relevant and significant because of two reasons. The first reason is that scholars have presented a need for further research on the extent or level or degree of integration of IARs. Adams (2013b, 2015) encourages research in analysing the quality of reporting of content elements in the IARs, paying particular attention to the external environment, opportunities and risks, strategy and resource allocation, business model and the future outlook. Cheng et al. (2014) argue that more research is needed to understand how companies are implementing their <IR> models and an evaluation of how organisations connect their core business activities to environmental, social and governance issues.

A similar call for research is made by De Villiers et al. (2014) on the extent to which <IR> practices are truly aligned to the <IR> framework and also on analysing the extent to which <IR> influences disclosure in the IARs. Furthermore, Simnett and Huggins (2015) encourage archival research in order to evaluate the quality of alignment of IARs with the <IR> framework at various stages of evolution of <IR>. Finding answers to objectives and research questions listed in the sections above is a direct attempt to fill the void in the literature pertaining to the level of integration of IARs when aligned to the <IR> framework.

The second reason is that <IR> is still in its infancy, therefore, there are few empirical studies exploring its practical implementation. This study provides some insights into <IR> in South Africa. The study stimulates fresh research on <IR> with the intention of informing the IIRC, SAICA and any other constituents who have an interest in <IR> that might include the preparers and users of IARs, the academic community and standard setters. It is the significance of <IR> in the evolution of corporate reporting and the lack of empirical evidence demonstrating the extent of <IR> practical implementation that motivated the current thesis. De Villiers, Venter and Hsiao (2017) concur when they note that "finding/designing an appropriate IR adoption or IRQ measure is an important step in designing an IR research project". As such, this study developed an accountability index, which will aid in measuring IRQ. It is anticipated that the findings might influence <IR> developments in policy formulation and practice.

1.10 Definition of terms and concepts
Integrated report:

An integrated report is a concise communication about how an organisation's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term (IIRC, 2013).

Users:

Users are those who rely on IARs prepared and presented by reporting entities, in order to satisfy some of their different or common information needs. The users include investors, employees, lenders, suppliers, customers, and the public (International Accounting Standards Board (IASB, 2018).

Integrated reporting:

A reporting system, which presents strategies, financial information and sustainability information of an entity, through a single report where the reporting is done in a way that enables stakeholders to assess the ability of an organisation to create and sustain value over the short, medium and long term (IIRC, 2013).

1.11 List of Abbreviations and Acronyms used

AAC	Auditing Association of Canada
ACCA	Association of Chartered Certified Accountants
ASX	Australian Securities Exchange
BAR	Behavioural Accounting Research
BBBEE	Broad-Based Black Economic Empowerment
BSC	Balanced Scorecard
CARs	Corporate Annual Reports
CMR	Capital Market Research
CPA	Certified Public Accountant
CRR	Corporate Responsibility Reporting
CSR	Corporate Social Responsibility
EMH	Efficient Market Hypothesis
ESG	Environmental, Social and Governance
FLI	Forward-Looking disclosure Information
FTSE	Financial Times Stock Exchange
GRI	Global Reporting Initiative

IARs	Integrated Annual Reports
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
IC	Intellectual Capital
ICD	Intellectual Capital Disclosure
ICT	Information and Communication Technology
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standards
IIRC	International Integrated Reporting Council
<IR>	Integrated Reporting
IRBA	Independent Regulatory Board for Auditors
IRQ	Integrated Reporting Quality
JSE	Johannesburg Stock Exchange
KPIs	Key Performance Indicators
LCA	Life-Cycle Analysis
NGOs	Non-Governmental Organisations
PAI	Polychotomous Accountability Index
SAICA	South African Institute of Chartered Accountants
SMEs	Small and Medium-sized Enterprises
SOW	Sociology Of Worth
SPR	Security Price Research
SPSS	Statistical Package for the Social Sciences
SR	Sustainability Reporting
TBL	Triple Bottom Line
XBRL	eXtensible Business Reporting Language

1.12 Chapter overview

The rest of the study is organised into the following sections: Chapter 2 is the theoretical framework where different theories, which include agency, political economy, legitimacy, institutional, and stakeholder theories, are explained and critiqued. An argument is also presented on the most appropriate theory to inform <IR>.

Chapter 3 is an engagement with related literature by other scholars focusing on accountability as a construct. In this section, financial accounting, balanced scorecard, triple bottom line, sustainability reporting and <IR> are analysed and critically evaluated. The ultimate objectives of this chapter are to show an awareness of the field of <IR> and to provide a detailed link on how this study fits into the existing studies by identifying gaps in the extant literature and problematising the relevant literature. The researcher intends to present the theory base for this study clearly and finally to show that the work has significance by pointing out limitations in the existing literature, which eventually leads to new knowledge creation.

Chapter 4 is another engagement with the related literature but focusing mainly on <IR>. The chapter covers conceptual studies, empirical studies (which investigate various <IR> constructs), <IR> in the not-for-profit entities, economics-based archival studies, case studies (which focus on why and how entities may adopt <IR>), studies which focus on <IR> assurance, and studies which measure the level of IRQ.

Chapter 5 details the methodology utilised to collect and analyse data. Population, sampling, period, the philosophy adopted for this study, the approach taken for the study, the strategy employed for the research work, time horizon considered in the study, data collection procedures and analysis were outlined. Chapter 6 details the quantitative data results and their implications. Chapter 7 details the qualitative data findings and their implications. Chapter 8 presents a summary of the findings, limitations, recommendations, contribution to the body of knowledge, conclusions of the study and the proposed future research.

CHAPTER 2
THEORETICAL FRAMEWORK

2.1 Introduction

This chapter covers the theoretical framework underpinning this study. This is done by describing a theory and the definition and functions of a theoretical framework. Different theories are critically examined and their relationships established. These include the agency theory, the decision-usefulness theory, political economy theory, legitimacy theory, institutional theory and the stakeholder theory. Each theory is explained in detail and critiqued before an argument is articulated on how the theory deemed most relevant informs <IR>.

The origins and the major concepts of the agency theory and the political economy theory are discussed. The discussion continues beyond the origins of the legitimacy theory by analysing the substantive strategies and the symbolic strategies adopted by entities in order to be perceived by society as legitimately existing. Isomorphism and decoupling are discussed under the institutional theory. For isomorphism, coercive isomorphism, mimetic isomorphism and normative isomorphism are addressed and then the ethical branch and the managerial branch of the stakeholder theory are discussed. The chapter ends by presenting the arguments in favour of the stakeholder theory, followed by the summary and conclusions to the chapter.

2.2 What is a theory?

In this section, the researcher defines a theory and a theoretical framework, and explains how <IR> may be analysed and understood from different theoretical perspectives. A theory is defined as "a coherent set of hypothetical, conceptual and pragmatic principles forming the general framework of reference for a field of inquiry" (Hendriksen, 1970). The *Oxford Advanced Learner's Dictionary* (2010, sv 'theory') defines a theory as "a formal statement of the rules on which a subject of study is based or of ideas that are suggested to explain a fact or event or more generally, an opinion or explanation". Key to these two definitions is the idea of principles and rules. Therefore, all the applicable rules, principles, assumptions and key ideas found in the theories relevant to <IR> are expounded from section 2.5 to 2.10.

2.3 What is a theoretical framework?

Despite the fact that there is no universally agreed and consistent definition of a theoretical framework, Anfara (2008) defines it as

> any empirical or quasi-empirical theory of social and or psychological processes at a variety of levels (e.g., grand, mid-range, and explanatory), that can be applied to the understanding of phenomena.

A theoretical framework may be likened to a paradigm, which Donmoyer (2008) defines as a set of perceptual orientations and assumptions shared by members of a research community. Kuhn (1970) argues that a paradigm is a perspective or a standard operating research procedure, which is made up of the research philosophy and research methods. The theoretical framework serves four main functions in any given research. These are identified by Anfara (2008) as:

❖ **Focusing a study:** It assists the researcher in sieving through information thereby separating the relevant from the irrelevant. It also helps in framing the study regarding sampling, analysis methods, concepts, constructs and propositions that inform the study. Furthermore, subjectivity and bias are minimised through making use of a theoretical framework. Concepts, which are used in coding and analysis of data, may also be derived from a theoretical framework.

❖ **Revealing and concealing meaning and understanding:** Theories have the potential to grant new ways to view familiar phenomena while, at the same time, may cause scholars to ignore phenomena that are not part of the theory. In some cases, theories have the tendency to distort phenomena being studied.

❖ **Situating the research in a scholarly conversation:** Theoretical frameworks assist in situating research contributions in a scholarly conversation by using known and accepted language in order to explain phenomena under study. This is done by looking at relationships between variables in the study and the theory itself before coming to a conclusion as to whether the study advances, refutes or supports the theory.

❖ **Revealing its strengths and weaknesses:** No theoretical framework may

perfectly explain or describe any phenomena or variables but it may demystify complex phenomena. The explanatory power of a theory lies in its inherent weaknesses and strengths.

2.4 Theories in context

Either to fulfil mandatory requirements or on a voluntary basis, many companies globally produce corporate annual reports (CARs). These CARs may be in the form of traditional financial reports or financial reports blended with environmental and social reports or integrated reports. The preparation and presentation of CARs may be grounded in different theories, which include the agency theory, legitimacy theory, political economy theory and the stakeholder theory (Choi, 1973) as well as the institutional theory (Deegan & Unerman, 2011). Because there is no single theory that has met universal approval in explaining and demystifying phenomena, (American Accounting Association [AAA], 1977), <IR> may be explained from more than one theoretical perspective.

The nature of social sciences cannot be understood from only one theoretical perspective, therefore several theoretical perspectives are used to understand phenomena. This thesis believes that <IR> exists within the domain of accounting, and accounting is classified as a social science. As a result, many theoretical lenses can be used to explain <IR> that may corroborate or compete with each other (De Villiers, 1996). The theoretical lenses, which may be used to understand and interpret <IR>, are presented below.

2.5 Agency theory

The agency theory originated in a paper by Jensen and Meckling (1976) that discusses the agency relationship. They explain that the relationship is made up of a contract between the principal and the agent, where the agent is to perform services for the principal that include some decision-making authority. This relationship also exists between the stakeholders (principal) and the management (agent). Central to the theory is the principal-agent relationship where conflicts may arise between the two mainly because of pursuing self-interests, which ultimately hampers teamwork and goal congruence (Ferrer & Ferrer, 2011). These conflicts can lead to information asymmetry between insiders (company management) and the providers of capital

(outsiders) (Al-Shammari, Brown & Tarca, 2008). However, information asymmetry may be minimised by reducing agency costs (monitoring, bonding and residual loss) (Jensen & Meckling, 1976) through proper information asymmetry management. This motivates companies to produce CARs with greater disclosure and more transparency (Akhtarudin, 2005).

2.5.1 Linking the agency theory to <IR>

It is argued that this study is grounded in the agency theory since integrated reports serve the purpose of disclosing financial, environmental and social transactions and attributes of companies in a transparent manner. This is executed in a single report thereby reducing information asymmetry by keeping the shareholders informed, which ultimately leads to lower agency costs. While the agency theory may be adopted to inform an <IR> study, arguments are presented below as to why the agency theory is rejected.

2.5.2 Critique of the agency theory

The agency theory may be a useful theoretical framework to ground the study of <IR> even though it is criticised for its lack of consideration of social and environmental disclosures, which are crucial elements of <IR>. It rather focuses mainly on the financial stakeholders who are neither drivers nor beneficiaries of the social and environmental disclosures (Parker, 2005). Moreover, the agency theory is based on unrealistic assumptions of free markets, which have often failed in the area of social and environmental reporting (Gray, Kouhy & Lavers, 1995). Although the agency theory possesses qualities of a theory that may inform <IR>, the theory is not considered to inform this study mainly because of the criticisms levelled above.

2.6 Decision-usefulness theory

Scholars, such as Sanders, Hatfield and Moore (1938), recognise the existence of users of accounting information and their differing information needs. Their research was premised on the assumption that the main purpose of accounting is to avail information, especially to shareholders, to assist them in decision-making (Staubus, 1961).

The origin of the decision-usefulness theory is found in Chamber's (1955) article

entitled "Blueprint for a theory of accounting" (AAA, 1977). Henderson and Scherer (1986) agree that Chambers (1955; 1957; 1966) is generally credited for developing the decision-usefulness theory, based on the users' needs, which was endorsed by the American Accounting Association. Under this theory, the major purpose of financial accounting information is to fulfil the information needs or wants of users (Bebbington, Gray & Laughlin, 2001). A particular type of information has to be availed for a specific class of users according to criteria that meet their decision-making needs (Deegan & Unerman, 2011). It is only through sound research that the decision-usefulness approach can predict suitable information needs for a particular group of users (Bebbington et al., 2001). In this context, "users" refers to equity investors, creditors, employees, analysts/advisers, business contact groups, government and the general public (taxpayers, ratepayers, consumers, political parties or environmental lobby groups) (The Institute of Chartered Accountants in England and Wales [ICAEW], 1975). The theory is divided into two approaches, namely, the decision-makers perspective and the decision model perspective (Bebbington et al., 2001).

2.6.1 Decision-makers' perspective

This asserts that decision-makers are aware of the information they require and therefore financial accounting's major function should be to fulfil these needs (AAA, 1977). A pattern of observations is made through conducting research that asks recipient organisations about the information they want. These observations then inform the contents of the financial accounting reports (Bebbington et al., 2001). The research is mainly questionnaire based and is often disjointed since different studies explore different types of information therefore there are limited linkages on the information researched (Deegan & Unerman, 2011). The research conducted under the decision-makers' emphasis is divided into two approaches, behavioural accounting research (BAR) and security price research (SPR), which are analysed below.

2.6.1.1 Behavioural accounting research (BAR)

BAR evaluates the relationship between current or proposed accounting information and the information needs of users as individuals or groups (Bebbington et al., 2001). BAR has its roots in cognitive psychology, economics and statistics, and was first

embraced by accounting scholars in the 1960s but became popular in the 1970s (Deegan & Unerman, 2011). Dyckman et al. (1975b as cited by Bebbington et al., 2001) note that BAR literature may be broken down into four broad segments.

The first one is identified as a group of studies that analyses the adequacy of financial statement information as compared to the opinions of users. The second group of studies is one, which explores the usefulness of financial statement information for specific decision-making problems particularly focusing on investment or disinvestment decisions in an entity's share capital. The third type of research is that where users' preferences and attitudes are evaluated against the current or proposed reporting practices. The last set of research is one, which establishes how users make judgements about what may be classified as material and how information for decision-making is processed.

2.6.1.2 Security price research

Security price research (SPR), which is also identifiable in the literature as capital market research (CMR), may be traced back to the 1960s just after the development of the efficient market hypothesis and event study methodology at the University of Chicago. Ball and Brown (1968) and Beaver (1968) are credited as pioneers of this research as it is known today (Kothari, 2001). SPR explores the role of accounting information in equity markets (Deegan & Unerman, 2011). This research establishes the relationship between accounting information and capital markets where the usefulness of published accounting information is assessed by the movement of share prices (Kothari, 2001). SPR also ascertains how the markets react to announcements of company information and assesses the relevance of different accounting information disclosure alternatives for users (Deegan & Unerman, 2011).

SPR is founded on the assumption that capital markets are efficient. This introduces the Efficient Market Hypothesis (EMH), which is understood by Fama, Fisher, Jensen and Roll (1969) as the rapid adjustment of share prices that takes place in the market as information is released and fed into that particular market.

EMH exists in three forms, namely, weak-form efficiency, semi-strong-form efficiency and strong-form efficiency. The weak-form efficiency asserts that security prices reflect

historical information about prices and trade volumes. The semi-strong-form efficiency perspective entails that share prices adjust efficiently in an unbiased manner to all publicly available information including annual earnings announcements, share splits, financial statements and any other relevant financial disclosures. Lastly, the strong-form efficiency perspective assumes that share prices reflect all information known to anyone at that juncture and that this includes information not publicly available (Fama, 1970; Deegan & Unerman, 2011). Semi-strong-form efficiency is deemed the most relevant perspective for SPR because it directly relates to the use of publicly available information, which may be in the form of IARs. Kothari (2001) theorises that there are four main areas of demand for SPR, which are: fundamental analysis and valuation, tests of capital market efficiency, the role of accounting in contracts and in the political process, and disclosure regulation.

2.6.2 Decision model perspective

The decision model perspective asserts that research is concerned with assessing the nature and form of an effective and efficient decision-making process. It further entails clarifying the information needs of the above-mentioned processes (Bebbington et al., 2001). The identification of information needs is seen as a secondary function. The main function is rather to develop models based upon the researchers' perceptions of what is considered important for efficient decision-making (Deegan & Unerman, 2011). This perspective is anchored on the assumption that different classes of stakeholders have similar accounting information needs and hence it concentrates on the varieties of information deemed crucial in the decision-making process. This is contrary to the decision-makers' perspective, which places more focus on evaluation of information needs.

The American Accounting Association (1977) explains that the decision-making process is divided into three elements. These elements are identified as the accounting system, the prediction model and the decision model. The first element, which is the accounting system, places emphasis on how information is measured and communicated. Under the prediction element, future events, alternative courses of action, outcomes and payoffs are presented. Lastly, under the decision element, informed by the two elements mentioned above, a particular strategy were formulated.

Therefore, the explanation is that any decision to be undertaken by users is guided by a decision model, which is serviced by a prediction model that, in turn, will have drawn data from the accounting system (Bebbington et al., 2001).

2.6.3 Linking decision-usefulness theory with <IR>

The decision-usefulness theory may be adopted to inform an <IR> study. It can be contended that, from the decision-maker's perspective, IARs produced by companies serve the purpose of availing proper accounting information to satisfy the needs and wants of users resulting in sound and proper decision-making by users. Furthermore, IARs grounded in the decision model perspective, which avails the most appropriate accounting information as perceived by researchers, allows users to be able to make proper decisions in relation to the most relevant accounting information presented by the companies. Moreover, IARs aid the providers of financial capital and all interested stakeholders, including employees, customers, suppliers, business partners, local communities, legislators, regulators and policy makers, in their decision-making processes after learning how an entity creates value over the short, medium and long term. While the decision-usefulness theory may be considered for an <IR> study, it is however not considered for this study as explained below.

2.6.4 Critique of the decision-usefulness theory

There are a number of criticisms levelled at the decision-usefulness theory. One such criticism is that the theory fails to cater for all the informational needs of all stakeholders while only taking care of the information needs of those who make decisions based on reported information (Abu-Baker & Karim, 1997). Kisenyi (1999) concurs that the decision-usefulness theory totally ignores the accountability of environmental reports.

The decision-usefulness theory is not an all-encompassing theory. It completely disregards the interests of non-financial stakeholders by only focusing on providers of financial capital. This means that it completely ignores environmental and sustainability reports, which cater for the needs of non-financial stakeholders.

The second criticism levelled against the decision-usefulness theory is that it is of a normative nature and neither clarifies a logical accounting foundation nor describes

the current accounting practices (Deegan, 2006). The theory is so poorly crafted that it lacks a logical explanation of why a particular accounting technique is selected over another (Staubus, 1999; Buys, 2010). The argument is further extended that such a selection is not based on decision-usefulness of information but rather on the economic consequences for stakeholders and managers (Deegan, 2006).

The theory is further criticised for its failure to recognise the different stakeholder powers and the strategies utilised by companies in order to legitimise their operational activities (Gray et al., 1995). The argument is that the theory is deemed subjective since it is based on researchers' perceptions of which accounting information warrants disclosure (Deegan, 2006). This limitation could also be interpreted as one of the reasons that led to the origin of the legitimacy and the stakeholder theories.

2.7 Political economy theory

<IR> could be understood in the light of the political economy theory. Political economy is defined by Gray, Owen and Adams (1996:47) as "the social, political and economic framework within which human life takes place". Within the context of this definition, the theory asserts that society, politics and economics cannot be separated (Deegan & Unerman, 2011). This means that economic issues cannot be fully interrogated without a careful consideration of the social and political environments. Extant literature has divided this theory into two categories, the classical political economy and the bourgeois political economy (Gray et al., 1996).

The classical political economy is more aligned to the works of Karl Marx, though Adam Smith and David Ricardo are often credited as the major founders of and contributors to this theory (Accomazzo, 2012). The main themes in the theory are inequality, class conflict and the role played by the state in the economy.

On the other hand, the bourgeois political economy theory does not recognise the elements central to the classical political economy theory but assumes a pluralistic perspective (Gray et al., 1995). The pluralistic perspective entails that different classes of stakeholders have power to influence a variety of decisions by government and corporations. Emphasis is placed on the rights of individuals or organisations to pursue their own goals and self-interests that are moderated by the social environment in

which they operate (Williams, 1999). The political economy theory is broad in nature and therefore there is an assertion that the legitimacy theory and the stakeholder theory are both derived from this theory (Gray et al., 1996). A link is also drawn between the political economy theory and the institutional theory.

2.7.1 Linking the political economy theory with <IR>

This study may be grounded in the political economy theory because CARs are social, political and economic documents, which serve as tools that legitimise political arrangements, economic institutions and corporates' ideological themes (Guthrie & Parker, 1990). The disclosures within CARs have the potential to convey political, social and economic meaning for a particular group of recipients (Guthrie & Parker, 1990). CARs are therefore perceived as one of the mechanisms through which those who control scarce resources maintain their position of dominance while undermining the position of those with scarce capital (Deegan & Unerman, 2011).

2.7.2 Critique of the political economy theory

While the political economy theory may be used to inform this <IR> study, it is dismissed because it does not cater for the environmental disclosures, which are integral in <IR>. In other words, the theory does not recognise the existence of natural capital.

2.8 Legitimacy theory

A different approach may be adopted where <IR> may be articulated through the legitimacy theory. Central to this theory is the concept of a social contract (Chan, Watson & Woodliff, 2014) that defines the relationship between an entity and the society at large. The theory further asserts that entities continuously seek to be seen as operating within the bounds and norms of the societies in which they are located (Deegan & Unerman, 2011). Therefore, an entity's survival into the foreseeable future is mainly determined by its level of legitimacy (Fernando & Lawrence, 2014). When society considers that an entity is operating illegitimately, which is often denoted by a widened legitimacy gap, then the social contract were threatened by product boycotts, financial capital reductions, supplier boycotts, labour boycotts and lobbying the government for tougher laws, higher taxes or fines (Chan et al., 2014). Furthermore,

if management realises that its entity's operations are disharmonious with the social contract, management has to perform remedial action.

For external parties to change their perception of the entity, as a result of remediation initiatives, this is done through disclosure using CARs. Deegan (2002) argues that the power and strategic importance of CARs is seen when perceptions of external parties change as a result of CAR disclosures. Chan et al. (2014) further affirm the importance of disclosure. They argue that remedial strategies adopted by management have an effect on external parties and therefore have to be accompanied by relevant disclosure. It may be argued that, while organisations seek to be perceived as legitimate, it is not the actual conduct that matters, but rather what society perceives to be legitimate in the conduct of the entity (Suchman, 1995). Thus, information through disclosure is necessary to change perceptions as unpublicised information will not change perceptions (Adams & Zutshi, 2004; Holder-Webb, Cohen, Nath & Wood, 2009).

Savage, Gilbert, Rowlands and Cataldo (2001) extend the argument by positing that legitimation imperatives may take two forms. The first is "substantive activity" that entails visible, material changes in the entity's goals, structures and processes. This means that an entity changes its behaviour, norms and values in order to conform to societal values and expectations. The second legitimation activity is called the "symbolic activity". This is where an entity does not implement material changes in its behaviour. The organisation rather presents an unrealistic picture where its operations appear to be compatible with social norms and values yet, in real terms, they are conflicting. Management generally favours symbolic activities over substantive tangible action because it is a relatively cheaper and more flexible option (Ashforth & Gibbs, 1990). According to Savage et al. (2001), entities employ twelve different strategies, elaborated below, that are classified either as substantive or symbolic.

2.8.1 Substantive strategies

The substantive strategies are:

- ❖ Role performance: This is where an entity adapts its goals, methods of operation and outputs to suit the requirements and expectations of those members who hold the critical resources needed by the entity, especially

resources that may threaten the existence of the organisation (Ashforth & Gibbs, 1990). This strategy is often chosen to fill a legitimation gap that is the result of a real performance failure by an entity. An entity may therefore present its mission and operations to meet the expectations of the market, normative, legal or political forces (Dowling & Pfeffer, 1975).

❖ Coercive isomorphism: This concept is expounded in section 2.9.1.1, under the Institutional theory. This concept thus links the legitimacy theory to the institutional theory. Briefly, this concept entails an evolutionary process where an organisation is forced to adopt the collective societal norms and values existing in the environment it was operating in. Due to this external pressure or influence, the result is that all organisations operating within this environment become somehow similar or isomorphic in nature (DiMaggio & Powell, 1983).

❖ Changing socially institutionalised practices: This is where an organisation attempts to change the definition and perception of social legitimacy aggressively so that its activities may be deemed legitimate. However, Dowling and Pfeffer (1975) caution that this is the most difficult strategy to successfully implement.

2.8.2 Symbolic strategies

In other cases, companies utilise symbolic strategies, which include:

❖ Adopting socially legitimate goals: This is where an organisation adopts and publicises socially legitimate goals while, in fact, pursuing less acceptable ones (Savage et al., 2001). In this case, entities tend to adopt and publicise ethical policies, but fail to establish credible monitoring and compliance mechanisms (Ashforth & Gibbs, 1990).

❖ Concealment: The entity denies or conceals any negative information that has the potential to undermine its legitimacy (Savage et al., 2001).

❖ Identification with symbols, values or institutions: Through rigorous communication, an entity attempts to align itself with values, symbols and institutions that have a strong legitimacy base (Dowling & Pfeffer, 1975).

❖ Offering accounts: This is where an entity offers explanations that are intended

to save the organisation from situations, which may negatively affect its legitimacy. Usually, these accounts are in the form of excuses and justifications (Savage et al., 2001).

❖ Admission of guilt: An entity admits being guilty of a particular offence mainly to diffuse the situation. The other purpose would be to present itself as a responsible organisation, which, when it errs, admits this and attempts to take corrective measures (Savage, Cataldo & Rowlands, 2000).

❖ Offering apologies: The entity shows remorse over a negative incident.

❖ Ceremonial conformity: This is where an entity adopts norms and practices, which are similar to the societal expectations. This adoption is merely symbolic since the formal organisational structure remains unchanged. Pfeffer (1981) contends that this may include setting up a task team to investigate a particular matter but without any material substance. Another technique is scapegoating where symbolic assurance is provided by negatively motivating or punishing deviant behaviour and poor performance (Neilsen & Rao, 1987).

❖ Misrepresentation or distortion: An entity may, intentionally or unintentionally, present an untrue account of events, misleading information or information that is open to misinterpretation to generate legitimacy (Savage et al., 2000).

❖ Evading, trivialising or skirting the issue: The entity offers partial explanations, trivialises or downplays the matter by not directly addressing the issue or giving implied explanations that are subject to misinterpretation (Savage et al., 2000).

2.8.3 Linking legitimacy theory with <IR>

Legitimacy theory may be considered when studying <IR> particularly where entities face political and social pressure. In this case, entities would use CAR disclosure to ward off some of these pressures. Extant literature suggests that legitimacy factors, including entity size and membership in environmentally sensitive industries, appear to explain the differences in information provision. Moreover, CARs were used by entities to communicate their legitimisation imperatives. In other words, one of the strategic purposes of accounting through CARs is to legitimise existence of the entity in the society in which it exists through relevant strategic disclosures (Lindblom, 1993).

2.8.4 Critique of the legitimacy theory

While there are several reasons to justify the legitimacy theory as a possible theoretical framework to study <IR>, it is dismissed on three grounds. Firstly, CARs produced by an entity seeking to increase its legitimacy are likely to be limited to good news like community development projects or environmentally friendly projects (Chan et al., 2014). Milne, Tregidga and Walton (2009) share a similar view that, under the legitimacy theory, entities tend to focus more on the positives while neglecting or diluting the negatives that can include financial scandals and major accidents.

Secondly, CARs informed by the legitimacy theory tend to be more about image enhancement than meaningful accountability (Cho, Michelon, Patten & Roberts, 2015). The theory is vague, particularly on the area of social and environmental reporting. It does not explain why entities decide to disclose selectively, or not at all (Fernando & Lawrence, 2014). The theory has also been criticised for being a clearly bourgeois managerial theory, which tends to ignore the concept of accountability and transparency (Deegan, 2002).

Lastly, further critique of the theory notes that it suffers some conceptual overlap with the political economy theory and the institutional theory because it lacks specificity on its standpoint. It also lacks the ability to anticipate and explain managerial behaviour and therefore suspicion is based on the premise that it privileges financial stakeholders in its analysis (Parker, 2005). Despite the fact that the legitimacy theory is widely used in the literature, it does not inform this study as argued above.

2.9 Institutional theory

A slightly different lens may be used to view <IR> in the form of the institutional theory that examines the different forms that entities take and proffers explanations as to why entities, within a similar "organisational field", have similar characteristics (Fernando & Lawrence, 2014). DiMaggio and Powell (1983:147) are credited as the proponents of this theory and they define an "organisational field" as

> those organisations that, in aggregate, constitute a recognised area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organisations that produce similar services or products.

They further argue that, once an organisational field is established, then different powerful forces emerge to lead these organisations to becoming similar to one another.

The institutional theory and the legitimacy theory share the principle of "legitimacy". However, the legitimacy theory focuses more on how particular disclosure strategies may be implemented to retain or regain legitimacy, whereas the institutional theory, on a broader level, focuses on how particular organisational forms might be adopted to bring legitimacy to the organisation (Deegan & Unerman, 2011). The theory possesses some complementary and partially overlapping properties to the legitimacy and stakeholder theory. The institutional theory has two dimensions, isomorphism and decoupling that are analysed in detail below (Fernando & Lawrence, 2014).

2.9.1 Isomorphism

Isomorphism is defined as "a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions" (DiMaggio & Powell, 1983). Isomorphism comes in three different processes that are coercive isomorphism, mimetic isomorphism and normative isomorphism (Deegan & Unerman, 2011).

2.9.1.1 Coercive isomorphism

This relates to external factors such as shareholder influence, employee influence and government policy (Fernando & Lawrence, 2014). Therefore, isomorphism comes about when powerful stakeholders pressurise or coerce different reporting entities to change their practices, such as corporate social reporting practices, and synchronise them with the expectations and demands of these powerful stakeholders (Deegan & Unerman, 2011). Ultimately, these reporting entities will resemble each other.

2.9.1.2 Mimetic isomorphism

Mimetic isomorphism involves organisations copying or emulating practices by other organisations in order to acquire competitive advantage (Fernando & Lawrence, 2014). Legitimacy uncertainty is identified as one of the drivers that encourage imitation between entities (DiMaggio & Powell, 1983). Entities that fail to imitate innovative practices risk losing legitimacy when compared to the whole sector

(Unerman & Bennett, 2004). It can therefore be argued that innovative environmental and social reporting done under <IR> may help promote the legitimacy of entities.

2.9.1.3 Normative isomorphism

Normative isomorphism can be understood as the pressure emanating from common values to adopt particular institutional practices (DiMaggio & Powell, 1983). For <IR>, there is a professional expectation that accountants will comply with King IV, Companies Act of 2008, IFRS and the <IR> framework. Therefore, this compliance is a form of normative isomorphism for all entities that produce IARs (an institutional practice), which are governed by the above-mentioned legislation and statutes (Deegan & Unerman, 2011). Deegan and Unerman (2011) also argue that normative isomorphism may be in the form of pressures that arise from formal or informal group influences to which managers belong. The shared influence may relate to organisational culture or working practices developed in their entities.

2.9.2 Decoupling

As identified earlier, the institutional theory has two dimensions, which are isomorphism and decoupling, which is understood as the intentional or unintentional separation between the external image of an organisation and its actual structures, practices or procedures (Fernando & Lawrence, 2014). Decoupling may imply that, while managers might see a need for their organisation to be seen as adopting and implementing particular practices, the actual practices can be very different from those declared and pronounced publicly (Deegan & Unerman, 2011). Decoupling may therefore refer to

> a situation where formal organisational structure or practice is separate or distinct from actual organisational practice. In other words, the practice is not integrated into the organisation's managerial and operational processes (Meyer & Rowan, 1977).

2.9.3 Linking institutional theory with <IR>

The institutional theory has the potential to be considered as the theory to inform this study because it provides a complementary perspective to the legitimacy theory and the stakeholder theory (see section 2.10 below) by offering an understanding of how

entities respond to ever-changing social and institutional pressures and societal expectations (Deegan & Unerman, 2011:361). The theory links organisational practices, like corporate reporting and accounting, to the values and norms of the society in which the organisation operates. The theory also explains in detail how managers adopt voluntary corporate practices because of pressure from powerful stakeholders.

2.9.4 Critique of the institutional theory

While the institutional theory has the potential to be used in any <IR> research, it has not been used much in voluntary social and environmental reporting as has been identified through examination of the extant literature. The institutional theory is not used in this study mainly because its major focus is on the managers and is limited to powerful stakeholders only. It also negates other non-visible stakeholders who are recognised by <IR>. Furthermore, the theory is criticised mainly because it argues that organisations might set up practices merely for show rather than for influencing corporate conduct (Deegan & Unerman, 2011).

2.10 Stakeholder theory

The terms "stakeholder" and "stakeholder theory" may be described in contradictory terms (Donaldson & Preston, 1995) as different theoretical aims and assumptions may be employed by scholars (Deegan & Unerman, 2011).

In this study, the term "stakeholder" is defined as "any group or individual who can affect or is affected by the achievement of the firm's objectives" (Freeman, 1984). This includes shareholders, employees, customers, communities and government officials (Jensen, 2001). Freeman (1984) argues that the term "stakeholders" is an all-inclusive term and, in some cases, may include the environment, terrorists, blackmailers and thieves. Ansoff (1965) first used the term "stakeholder theory" in defining organisational objectives when he argued that the main objective of an entity was to attain an optimal balance in the conflicting demands of different stakeholders in the entity.

The stakeholder theory operates within a scope of assumptions. Fernando and Lawrence (2014) identify seven such assumptions:

- ❖ Stakeholders can be clearly identified from the perspective of the entity.

- ❖ There is need for proper management of stakeholders by an entity in order to achieve its objectives.

- ❖ There are different categories of stakeholders and these categories may harbour conflicting interests.

- ❖ An entity must have the ability and capability to balance the conflicting interests between stakeholders.

- ❖ Stakeholders pressurise an entity in expectation of a return or stake in the entity.

- ❖ There is a positive correlation between the ability of stakeholders to pressurise an entity and the organisational attributes of the stakeholders.

- ❖ An entity has not only financial but also social and environmental obligations to its stakeholders.

In the light of the above-mentioned assumptions, the stakeholder theory entails that managers should make decisions that consider the interests of all stakeholders of an entity (Jensen, 2001). There is also a further argument that all stakeholders are entitled to agree and hence to participate or choose not to participate in the decision-making that determines the future direction of an entity in which they have interests. However, because of the impracticality of consulting every stakeholder, management therefore has the obligation to represent every stakeholder's interests and hence stakeholders have indirect participation in the entity's decision-making (Hasnas, 1998). Organisational accountability therefore goes beyond economic and financial performance (Guthrie, Petty & Ricceri, 2006).

Although the term "stakeholder theory" was first used by Ansoff (1965), the content of the theory can be traced back to the work of Johnson in 1947 (Fernando & Lawrence, 2014) and later Freeman (1984; 1994). Stakeholder categories include strategic and moral stakeholders; external and internal stakeholders; latent, expectant and definitive stakeholders; primary and secondary stakeholders; supportive, marginal, non-supportive and mixed blessing stakeholders; single issue; and multiple stakeholders (Fernando & Lawrence, 2014). These stakeholders harbour different expectations

from entities. Also, various classifications of the theory exist that include the intrinsic stakeholder commitment model and the strategic stakeholder model (Berman, Wicks, Kotha & Jones, 1999). Donaldson and Preston (1995) also identify the descriptive/empirical branch, the instrumental branch and the normative branch.

Although there are many classifications of the stakeholder theory in the literature, the more common branches, the ethical (moral) or normative branch and the positive (managerial branch) (Guthrie et al., 2006) are analysed below.

2.10.1 Ethical/moral branch

The ethical branch of the stakeholder theory holds that all stakeholders, irrespective of their economic power, have the right to be treated fairly by their organisation. Managers are expected to manage the organisation for the benefit of all stakeholders as it is believed that an entity's main motive is not profit maximisation, but rather meeting the expectations of all stakeholders through proper accountability. Therefore, the main reason for CSR disclosure is the desire to be accountable to all stakeholders without considering their economic power or lack of it. Under this branch, the word "stakeholder" is interpreted in a wider sense (Hasnas, 1998) as stakeholders might have different and contradictory interests, and then managers have to attain the optimal balance between them (Hasnas, 1998). This branch advocates consideration for all stakeholders not just the privileged or powerful stakeholders who control critical resources required by the entity (Fernando & Lawrence, 2014; Gray, 2010).

2.10.2 Positive/managerial branch

The second perspective of the stakeholder theory is known as the positive (managerial) branch that posits that managers of an organisation mainly focus on the expectations of the stakeholders who control the resources of the organisation or who have influential power in the organisation (Deegan & Unerman, 2011). In this case, the major motivation for an entity to prepare IARs is the desire to manage influential stakeholders. This means that stakeholder power is a function of the stakeholder's degree of control over the entity's resources (Watts & Zimmerman, 1986). Therefore, the more critical the stakeholder resources are to the survival and viability of an entity, the greater the expectation that stakeholder demands were fulfilled (Deegan, 2000). Unlike the ethical perspective, the managerial perspective interprets "stakeholders" in

a narrower sense (Hasnas, 1998). Attention is given to the critical stakeholders while neglecting expectations of the less powerful and less influential stakeholders. The expectation is that an entity owes accountability to its economically powerful stakeholders as compared to all stakeholders catered for in the ethical perspective. Stakeholders' influence effected through stakeholder activism is considered critical since it may positively or negatively affect the well-being of the entity (Murray & Vogel, 1997).

2.10.3 Uses of the stakeholder theory

The stakeholder theory serves three main purposes, which are at a descriptive/empirical level, an instrumental level and a normative level (Donaldson & Preston, 1995) as described below.

2.10.3.1 Descriptive/empirical purposes

Here the theory is mainly used to describe or explain specific company characteristics and behaviours that refer to:

- ❖ the nature of companies (Brenner & Cochran, 1991).

- ❖ the way managers perceive the nature of their management styles (Brenner & Molander, 1977).

- ❖ what board members perceive to be the interests of different stakeholders (Wang & Dewhirst, 1992).

- ❖ how companies are actually managed (Clarkson, 1991; Kreiner & Bhambri, 1991).

Furthermore, under the empirical purposes, the theory may be used to test the ability of stakeholders to impact corporate social responsibility (CSR) disclosures (Deegan & Unerman, 2011). Scholars tested the influence of stakeholders on the corporate social responsibility disclosures and found different results, which are summarised in Table 1.1 below.

Table 1.1: Influence of stakeholders on corporate social responsibility disclosures

AUTHOR	RESULTS
Roberts, 1991	Stakeholder power provides explanations on the levels and types of CSR.
Neu, Warsame & Pedwell, 1998	Demands from financial stakeholders and government regulators were responded to more seriously than those from environmentalists.
Islam & Deegan, 2008	Operating and disclosure policies were influenced by multinational buying companies (Western consumers).

Source: Adapted from Deegan and Unerman (2011)

2.10.3.2 Instrumental purposes

This mainly ascertains the connections (or absence of connections) between stakeholder management and the achievement of classic organisational objectives (Donaldson & Preston, 1995) with descriptive/empirical data, when available. This theory is predictive in nature as it posits that, if certain practices are carried out, then certain results were achieved. Most studies in this category make use of statistical methodologies in order to ascertain traditional business objectives such as profitability and growth (Cochran & Wood, 1984; Cornell & Shapiro, 1987; Preston & Sapienza, 1990). Interviews and direct observations can also be used (Kotter & Heskett, 1992; Belal & Owen, 2007). What stands out visibly from these studies is that, when stakeholder principles and practices are adhered to, then traditional corporate performance objectives are far more achievable as compared to opposing approaches or theories.

2.10.3.3 Normative purposes

This theory interprets the function of companies and identifies the philosophical and moral guidelines of the management (Dodd, 1932); even Friedman's (1970) attack on CSR is grounded in the normative approach (Marcus, 1993). The normative approach is categorical yet prescriptive. It is categorical in the sense that, in understanding phenomena, the theory offers only one perspective and no other alternative perspectives are proffered. This theory works on the presumption that stakeholder management acts as if all stakeholders' interests and concerns have intrinsic value.

2.10.4 Critique of the stakeholder theory

Critics of the stakeholder theory argue that strategic decisions relating to social and environmental disclosure are influenced more by their bourgeois tendencies rather than a commitment to corporate responsibility and accountability (Parker, 2005). Furthermore, the theory is also criticised because it displays a form of corporate disclosure that is mainly responsive to the most powerful and influential stakeholders while neglecting the less influential stakeholders (Gray et al., 1995). The other limitation, particularly from an ethical perspective, is the need for management to treat all stakeholders equally despite them having contradictory and different interests (Fernando & Lawrence, 2014). However, the onus remains on the management to consider the interests of all stakeholders when developing company policy in order to optimise and balance those different interests.

2.10.5 Arguments in favour of the stakeholder theory

There are several reasons, which explain why the stakeholder theory has become competitive when it comes to informing CSR research and, in turn, <IR>. It is considered unethical management behaviour to focus more attention on the demands of one category of stakeholders (most likely shareholders/shareowners) while the interests of other stakeholders are ignored (Halal, 1990). While there may be unethical managers, most managers want to be seen to be ethical. Explicitly or implicitly, therefore managers tend to uphold the stakeholder theory in order to be perceived as ethical.

Furthermore, by accounting for their activities to all their stakeholders, entities acknowledge the stakeholders' right-to-know about their activities. The provision of CSR reports and, in this context IARs, reduces information asymmetry, which may be caused by managers (insiders) having more operational knowledge about an entity than outsiders do (Chatham, 2004). Minimising information asymmetry leads to lowered information risk, which, in turn, may lower the cost of capital (Easley, Hvidkjaer & O'Hara, 2002). The other benefit to accrue from lowered information asymmetry is that all stakeholders were placed on the same footing by reading and studying similar IARs. Fernando and Lawrence (2014) note that provision of CSR information and, in this case, <IR> information, leads to several benefits, which

include:

- ❖ an improved organisational image

- ❖ attraction of investors

- ❖ an improved retention of existing employees

- ❖ attraction of prospective employees

- ❖ Improved relationship with stakeholders in order to win their approval and support.

Another benefit from the stakeholder theory that lies in both the professional and academic management literature is a perception that stakeholder management is positively related to company performance (Donaldson & Preston, 1995). As a result of this perception, companies did not only focus on the shareholders, but rather paid attention to other stakeholders (Savage, Nix, Whitehead & Blair, 1991). The stakeholder theory therefore became popular because managers wanted to reap long-term benefits from strategically managing different stakeholders and not only the shareholders.

In the past, the "business judgement rule" gave exclusive authority to the management to conduct affairs in a manner, which benefited mainly the shareholders (Donaldson & Preston, 1995). But, due to the evolution of business practices, unfavourable court decisions and changes in statutory requirements, attention was given to all stakeholders. The stakeholder theory therefore caters for the needs of employees, creditors, suppliers, customers, and local communities (Orts, 1992). The stakeholder theory was chosen to inform this study because of its advantages as compared to the other theories explained in this chapter.

2.10.6 Linking the stakeholder theory with <IR>

This theory can be tested in a number of ways by applying content analysis to company annual reports. The annual report is the most efficient way for an organisation to communicate with those stakeholder groups deemed to have an interest in controlling certain strategic aspects of an organisation. A content analysis of Intellectual Capital disclosures can be used to determine whether this communication is in fact taking place. Are companies responding to stakeholder

expectations, real or perceived, by offering a voluntary account of their Intellectual Capital? (Guthrie et al., 2006:4).

This description is relevant to this study as content analysis is performed using the constructed polychotomous accountability index in order to evaluate the quality of IARs over the period 2013 to 2016 and trying to establish whether companies are succeeding in communicating financial matters, environmental matters and social matters to the stakeholders.

2.11 Relationship between legitimacy theory, institutional theory and stakeholder theory

While the previous sections focused more on each theory and how it may inform or not inform <IR> or corroborate or compete with each other, this section focuses more on the similarities between these theories. All three theories emanate from the political economy theory, which was explained in section 2.7 above (Gray et al., 1996). Fernando and Lawrence (2014) concur that while there are minor differences between the legitimacy theory, stakeholder theory and institutional theory, they are derived and developed from the political economy theory, which is premised on the notion that society, politics and economics are inseparable. Central to the political economy theory is the notion that society, politics and economics cannot be separated.

Therefore, economic activities may not be fully interrogated without analysing the social and political environments within which these economic activities take place (Fernando & Lawrence, 2014). The argument is that CARs and, in this case, IARs are political, social and economic documents which are "a product of the interchange between the corporation and its environment and attempt to mediate and accommodate a variety of sectional interests" (Guthrie & Parker, 1990:166). In other words, IARs are considered biased documents, which serve the selfish interests of companies.

The second similarity is that the three theories are considered system-oriented theories (Gray et al., 1996) that allow researchers to focus on the role of information and disclosure in the relationships between organisations, the state, individuals and groups (Gray et al., 1996). The three theories posit that disclosure decisions are intended to improve and strengthen the relationships between entities and their

stakeholders.

Fernando and Lawrence (2014) note that these three theories are related directly or indirectly to each other and must therefore be deemed complementary rather than competitive. Berrone and Gomez-Mejia (2009) concur on the complementary nature of the three theories because "the main thesis of institutional theory is that organizations enhance or protect their legitimacy by conforming to the expectations of institutions and stakeholders" (Berrone & Gomez-Mejia, 2009).

2.12 Summary and conclusions

The chapter started by introducing and defining the main concepts to be analysed in the chapter, a theory and a theoretical framework. A theory was found to be a set of assumptions, rules and ideas, which explain a fact, an event, an opinion or an explanation. On the other hand, a theoretical framework is understood to be an empirical or quasi-empirical theory that may be applied to understand phenomena. It was also noted that the theoretical framework serves many purposes, which, among others, include focusing a study, revealing the meaning of variables or concepts under study and concealing the understanding of concepts. This chapter also revealed the strengths and weaknesses of the theoretical framework chosen for this study.

The chapter explained and evaluated theories that influence <IR> which are the agency theory, decision-usefulness theory, political economy theory, legitimacy theory, institutional theory and stakeholder theory. The agency theory is mainly centred on the relationship between the stakeholders (principal) and management (agent) where conflicts arise due to the pursuit of self-interests. The conflicts often lead to information asymmetry, which may be controlled by reducing agency costs. Agency costs manifest themselves in the form of monitoring costs, bonding costs and residual loss. The agency theory was dismissed based on its non-consideration of the social and environmental disclosures, which are deemed crucial elements for <IR>.

The next theory was the decision-usefulness theory that asserts that the main purpose of accounting information is to assist users in decision-making. The theory is divided into two perspectives, the decision-makers' perspective and decision model perspective. The decision-makers' perspective is further divided into the BAR, which

evaluates the relationship between accounting information and equity markets; and the SPR, which evaluates the role of accounting information in the equity markets. The second perspective is the decision model that is concerned with assessing the nature and form of an effective and efficient decision-making process. The theory was dismissed because of its non-consideration of environmental and sustainability imperatives of entities.

The political economy theory posits that economic issues may not be fully understood without an explicit understanding of the social and environmental contexts in which they exist. Furthermore, the theory is divided into two categories, the classical and the bourgeois political economy. The political economy theory was dismissed for this <IR> study because it ignores the environmental disclosures, which are integral for any <IR> study.

The legitimacy theory asserts that there is a relationship between an organisation and the society in which it exists. What defines the relationship is the level of organisational legitimacy as perceived by society. Under this theory, two types of legitimation strategies exist and these are substantive strategies, which are tangible material changes effected in the organisation's goals and operations, while symbolic strategies refer to changes in an organisation's actions. The theory was not chosen to inform this study on three grounds. Firstly, IARs produced by an organisation seeking to improve its legitimacy tend to be biased by reflecting mainly the good news and neglecting the bad news. Secondly, the theory is more about image improvement at the expense of real accountability. Lastly, the theory overlaps into the political economy theory and the institutional theory, hence suffers from a lack of individual uniqueness.

The other theory tackled in the chapter was the institutional theory, which is mainly centred on the legitimacy concept and is made up of two constructs, isomorphism and decoupling. While one may ground an <IR> study on the institutional theory, that grounding was not done in this study because the theory has been rarely used in voluntary social and environmental research. The theory was further criticised for mainly focusing on managers and powerful stakeholders while negating the non-visible stakeholders. The argument is that some organisations have practices merely

for show purposes and not for accountability purposes.

The stakeholder theory is divided into the ethical/moral branch and the positive/managerial branch. The ethical branch asserts that all stakeholders have the right to fair treatment despite their economic power or lack of it. On the other hand, the managerial branch presents stakeholders as only those having adequate resources to influence the well-being of an organisation. The theory was found to have some limitations that include bourgeois tendencies and favouritism towards the most influential stakeholders. Arguments in favour of the stakeholder theory were also presented. It was argued that it is an unethical practice to focus more attention on one kind of stakeholder other than all stakeholders. Furthermore, it was pointed out that providing IARs produced under the stakeholder theory would minimise information asymmetry that, in turn, might lower the cost of capital. The chapter closed off by establishing the relationship between the legitimacy theory, institutional theory and the stakeholder theory.

The chapter critically examined different theories, which may be considered when choosing the theory in which to ground an <IR> study. The approach taken was to examine contents of each theory and how each theory relates to <IR>. The stakeholder theory was ultimately chosen to inform this study because of its inclusive nature. It caters for all stakeholders who are also catered for by <IR>. After spending some time elaborating the different theories that may be considered to inform an <IR> study, attention will now be turned to the construct of "accountability" and this will be addressed in the following chapter below.

CHAPTER 3

LITERATURE REVIEW: ACCOUNTABILITY

3.1 Introduction

(Some of the sections in this chapter were presented at the 5th International Conference on Accounting, Auditing, and Taxation, 2016) This chapter traces the construct of accountability and how it changes to cater for the needs of different stakeholders. Different kinds of accountability are analysed. There are different phases through which accountability evolved. The first phase is financial reporting which can be traced to as early as 5000 BC (Ancient times) until the present day financial reporting. This phase ends with a critique of financial reporting. The shortcomings of financial reporting ushered in the second phase namely the balanced scorecard (BSC). This phase was dominant in the 1990s and is one of the first performance measurement systems to detail financial and non-financial information.

Shortcomings from the BSC arguably contributed towards birth of the triple bottom line (TBL) which is detailed in phase three. This also became popular in the 1990s and focused more environmental and social disclosures. However, the TBL's limitations contributed towards the birth of sustainability reporting whose main focus is how an entity survives into the future by being cognisant of the financial and non-financial variables. Arguably, the shortcomings of sustainability reporting contributed towards the birth of <IR>. <IR> is unpacked in detail and its limitations are also presented. Each of the reporting systems is analysed and a link is drawn on how it fulfils accountability. The chapter argues the limitations of each of the reporting systems contributed towards birth of the successive reporting system.

The chapter provides a basis upon which <IR> is considered to be a superior system of corporate reporting even though it has limitations. The last element to be analysed is the comparison between financial reporting, sustainability and <IR>. The summary and conclusion close the chapter. Accountability is the first phenomenon to be addressed below.

3.2 Accountability in context

While it is important to appreciate that there is not a single agreed definition of accountability, it could be seen as an exchange of reasons for conduct (Garfinkel, 1967) or as the requirement for one party to account to another party for its performance over a given period (Coy & Pratt, 1998). At the same time, accountability may be defined as the feeling of responsibility, obligation and the need to justify one's actions to others or to oneself (Erdogan, Sparrowe, Liden & Dunegan, 2004).

As a concept, accountability may be traced to the separation of ownership from management in business organisations and is closely related to stewardship (Coy & Pratt, 1998). Accountability, which manifests itself through individual behaviours and decision-making activities, emerged from a combination of both internal and external sources. Internal accountability, which could be referred to as intrinsic accountability, refers to individuals who feel they have an obligation to perform certain behaviours mainly because of their commitment to adhere to that behaviour. External accountability that may also be regarded as extrinsic accountability, on the other hand, refers to individuals who perform certain behaviours because they are expected to do so by others (Erdogan et al., 2004).

Five typological identifications of accountability exist in the literature, political accountability, managerial accountability, public accountability, professional accountability and personal accountability (Sinclair, 1995) as discussed below.

- ❖ Political accountability entails the desire of a political appointee being loyal to a political party and Ministers answering questions in Parliament.

- ❖ Managerial, financial or corporate accountability refers to the answerability concerning efficiency and effective use of resources. This study focuses on this type of accountability more than any other type.

- ❖ Public accountability refers to the obligation to serve the electorate through different mechanisms, which include newspaper reports, hearings and public lectures.

- ❖ Professional accountability entails that sense of duty of someone who belongs to a professional body or an expert group where expertise and professional

integrity are valued and expects that individual to hold a privileged and knowledgeable position in society.

❖ Personal accountability refers to one's fidelity to his/her conscience in tenets like human dignity and accepting responsibility for actions and decisions that affect other human lives (Sinclair, 1995).

Accountability, as a construct, is fragmented and has multiple facets. In the process of being accountable by one type of accountability, other forms of accountability may be compromised (Sinclair, 1995:231). Accounting systems tend to serve two accountability goals. Firstly, they provide stimuli by which problems are recognised and defined, and alternative courses of action are isolated and their consequences elaborated (Roberts, 1991). The second goal then becomes the analysis and appraisal of the available alternatives.

Accountability has gone through an evolutionary process over thousands of years, from being accountable to a King or Emperor to becoming accountable to all stakeholders who have an interest in the entity's life. Managerial/financial/corporate accountability evolved through different phases ranging from Financial Reporting, Balanced Scorecard, Triple Bottom Line, Sustainability Reporting and <IR> (De Villiers et al., 2014) (see Figure 3.1 below). This evolution catered for the continuously changing needs and requirements of different stakeholders which illustrated in Figure 3.1 below.

Figure 3.1: Relationship between accountability, financial reporting, balanced scorecard, triple bottom line, sustainability reporting and integrated reporting
Source: Researcher

The first reporting system, financial reporting is presented below.

3.3 Financial reporting

The *Conceptual Framework for Financial Reporting* (IASB, 2018) declares:

> The objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity. Those decisions involve buying, selling or holding equity and debt instruments, and providing or settling loans and other forms of credit.

Entity accountability, under financial reporting, is done to justify the entity's financial decisions to the current and potential shareholders, lenders and creditors. Financial reporting is guided by the Conceptual Framework for Financial Reporting, International Financial Reporting Standards (IFRS), International Accounting Standards (IAS), International Financial Reporting Interpretations Committee (IFRIC) and the

Standards Interpretation Committee (SIC). These documents are produced by the International Accounting Standards Board (IASB), which was established in 1973 under the name of the International Accounting Standards Committee (IASC). After 2001, the name was changed to its current name, the IASB.

As at 31 August 2016, the IASB (2016) reports that 147 jurisdictions have IFRS applied by domestic companies. Of these 147 countries, 122 require IFRS to be used by listed companies, two require financial institutions to use IFRS, one country is in the process of adopting IFRS, one country is still converging its domestic standards with the IFRS, 13 permit rather than require the use of IFRS by companies and eight are using domestic or regional standards. IASB further reports that approximately 25 000 of the 48 000 companies registered on 85 major stock exchanges are using IFRS to prepare their financial reports. It is evident from the numbers that Financial Reporting has been accepted globally as a form of corporate accountability. The stages through which financial reporting evolved are presented below (see Figure 3.2). The first stage to be analysed is "Ancient times".

3.3.1 Ancient times: 5000 BC to 500 BC

Financial reporting, as it is known today, has evolved over time. Archaeological research recognises the presence of some form of primitive recordkeeping from about 5000 BC (Edwards, 2014). Mattessich (1987) and Belkaoui (1992) however, believe that the first tablets of records were prepared around 3000 BC. Recordkeeping emerged almost simultaneously with the first civilisations in Mesopotamia, Babylon and Egypt that produced the first organised governments (Belkaoui, 1992). This era also marks the birth of most ancient written languages and examples of the oldest surviving business records, which were found in prehistoric tombs (Edwards, 2014). The records were in the form of graphic symbols on items like shards, vases and stones (Edwards, 2014). The symbols indicate goods, quantities and other business data. Recordkeeping evolved from pictures to symbols to letters and finally to writing. The symbols were usually animals or birds. For birds, missing feet or an extended neck indicated some numerical significance and the number of times an animal was repeated indicated the quantity (Edwards, 2014; Most, 1982). Furthermore, scribes recorded business transactions and land sales, which were in the form of inventories,

list of commodities used for payments, contracts of sale or loan and occasionally simple journal entries (Most, 1982).

As indicated on Figure 3.2 below, the Code of Hammurabi (named after the King of the first dynasty of Babylonia from 2285–2242 BC) is considered to be one of the first attempts to standardise the financial reporting process (Brown, 1968; Cronjé, 2007). The code required an agent selling goods for a merchant to surrender to the principal a sealed memorandum quoting the prices (Edwards, 2014). This equates Hammurabi's Code to the modern day International Financial Reporting Standards (IFRS). A similar type of accounting operated in Egypt during the time of the Pharaohs as evidenced by a surviving example of papyrus dated 2390 BC, which is made from reeds common in the Nile Delta (Edwards, 2014). It was the duty of scribes to prepare records of receipts and disbursements of corn, silver and other commodities.

Another development of a non-written accounting record is the knotted cord known as the "quipu" used in Peru, Hawaii and China (Edwards, 2014). Different coloured cords were used to indicate different kinds of items being recorded. Values of knots depended mainly on their distance from the main cord, while knots at the very end of the cord were equivalent to a unit of one. The "quipu" was used to record the number of people in a village or the quantities of inventory in the warehouse. A surviving "quipu" from Hawaii is believed to be from the eighth century AD. In China, use of the knotted cords is mentioned by Confucius (551–489 BC).

```
C
o
m                                              IFRSs(2004/7)
m                          Corporate governance including sustainable
o                                   reporting (1994 and 2002)
n
                                       Accounting standards
B                                      International harmonisation
o                                          (since 1990)
d
y                                       Accounting standards
                                           (late 1970s)
o                                   Updated SA Companies Act
f                                       (1926 & 1973)

a                                        SA Companies Act
c                                           (1909)
c
o                                    English Companies Act
u                                         (1862)
n
t                                      Industrial Revolution
a                                    More accurate reporting
b                                          (1700s)
i
l                                   Summa de Arithmetica
                                    (1494) Paciolo Venice
t
y                                      Libro segreto
                                       Albertini firm
K                                      (1302-1329)
n
o                                   Capitulare de Villis
w                                     Charlemagne
l                                    (Ninth century)
e
d
g                                   Tablets of stone
e                                  Greece (500 BC)

                                   Wax tablets
                           Romans (700 BC – 476 AD)

                           Government accounting
                              in China (2206 BC)
                            Code of Hammurabi
                       Babylonia (2285-2242 BC)

Recording of transactions
e.g. Babylonia (5000 BC)
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Ancient Times   Middle Ages   Modern Times

Figure 3.2: The history of financial reporting
Source: Cronjé (2007:27)

It is believed that in the ancient civilisations, particularly in Babylon, early record keeping was developed to meet government and business needs. In ancient China, reporting was used to evaluate the success of the government and its personnel

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(Cronjé, 2007:28). Also in China, each government department was compelled to report on what it had done through an annual report, which would then be audited by the "control-general". Archaeological evidence further reveals that some financial reporting took place on wax tablets during the Roman civilisation (700 BC–476AD) but these could not survive due their perishable nature (Most, 1982). The Greeks also kept some accounting records as evidenced by the stone tablet, which reports disbursements of the Athenian State (418 BC–415 BC).

Ancient record keeping improved from the physical movement of goods to the use of coins in the kingdom of West Asia Minor in 700 BC. Record keeping was also done on papyrus rolls (Edwards, 2014). Government accounting in the Roman Empire is estimated to have been in place from about 200 BC. The system was highly developed and reported on revenue collected, expenditure incurred and other financial transactions. As early as 84 BC, the system already had the principle of the separation of duties where scribes prepared the accounts while proquaestors supervised and audited those (Edwards, 2014).

The striking feature of ancient times is that the double entry principle, as it is known today, emerged as early as 3200 BC (Mattessich, 1987). Arranging tokens in the clay envelopes represented the quantities of various assets, which can be called a debit entry. Mattessich (1987) notes that there was a need to fulfil two requirements, which was revealing from outside the contents of the envelope and revealing, at a glance, the entire equity of the envelope. This would be done by impressing hardened tokens into the surface of the softer clay envelope. This second exercise is deemed mirror impressions of the earlier recording. So, in a sense, it represents the credit entries, hence the start of the duality principle as it is understood today. The second stage to be presented is the "middle ages".

3.3.2 The middle ages: 400 BC to 1700AD

Two major developments to financial reporting are found in this period. The first one is development of "Capitulare de Villis", an observable accounting system, which emerged in the ninth century (Cronjé, 2007) in the Roman Empire during the reign of Charlemagne (768–814 AD) who is also known as Charles the Great or Charles I or King of the Franks. This document was developed to lay out rules and regulations on

how to administer animals, land, justice, revenue collection and distribution, and the overall administration of the emperor's properties and assets. This document was the origin of IFRS that started in 2005 with the release of the International Accounting Standards.

The second major event in the development of financial reporting is the publication of the book by Luca Pacioli, a Franciscan friar, entitled *Summa de Arithmetica, Geometria Proportioni et Proportionalita* in 1494, which is translated to *Summary of Arithmetic, Geometry, Proportions and Proportionality.* Pacioli is generally credited to be the father of double entry accounting, not because he created it, but because he was the first one to document this practice that has been in use in Venice for over 200 years (Cronjé, 2007). Pacioli explains the "Method of Venice" also known as "the Italian method" where debit *(adebeo)* and credit *(credito)* were identified as the elements required to secure a double entry. He further suggested recording the name of the buyer or seller or the description of the goods with their weight, size or measurement and also the terms of payment (Belkaoui, 1992). The book has advice on computing periodic profit and the closing of books at the end of the year. The book was translated into different languages and this greatly contributed towards the spread and popularity of the Method of Venice. *Summa de Arithmetica, Geometria Proportioni et Proportionalita* systematically records the accounting practices that prevailed at the time (Cronjé, 2007). The third and last stage to be presented is "modern times" and is presented below.

3.3.3 Modern times: 1700 AD to present financial reporting

The Industrial Revolution in Europe and America in the 1700s brought about fundamental changes in financial reporting (Cronjé, 2007). During this period, predominantly agrarian rural societies became urban and industrial and this was marked by a transition from domestic production to factory production (Most, 1982). This transition contributed towards growth in the size of a company and its capital requirements. The need to raise these capital requirements led to a request for meaningful accounts by promoters and shareholders. The English Companies Act, which was adopted in 1862, governed the preparation of accounts (Cronjé, 2007). As the accounts became more complex, there was a call, especially in Great Britain, to

have these accounts audited and this created a need for public accountants (Most, 1982). Further developments in financial reporting were also realised in South Africa with the adoption in 1909 of the South African Companies Act, which was modelled from the English Companies Act. The South African Companies Act was amended twice, in 1926 and 1973, to cater for the developments in financial reporting. In 2008, the Companies Act 71 of 2008 was enacted thereby repealing the South African Companies Act of 1909. Another feature of this era is the emergence of the generally accepted accounting principles (GAAP), which guided mandatory disclosures. GAAP emerged in the 1970s and many developed countries constructed their own sets of GAAP to guide recognition, measurement and disclosure of transactions (Cronjé, 2007).

Developing one global set of accounting standards as compared to each country using its own GAAP brought a number of benefits, which accrued from following universally accepted IFRS. El-Gazzar, Finn and Jacob (1999) include a reduction in costs associated with financial analysis and disclosure resulting in markets, which are more efficient and that enhance cross-border financing and trade. Non-compliance with IFRS results in the incomparability of financial statements produced in different geographical locations, which leads to the inefficient allocation of capital, reduced cross-border investment, non-credibility of local markets to foreign investors and difficulty in the consolidation of financial investments (El-Gazzar et al., 1999). The European Union, Hong Kong, Australia, New Zealand and South Africa adopted the first set of IFRS in January 2005, and other countries followed thereafter. Currently, about 122 jurisdictions require the use of IFRS by all or most public companies (IASB, 2016). The USA, through the Financial Accounting Standards Board (FASB), has not yet adopted the IFRS but discussions are in place towards converging the US GAAP and the IFRS. Criticism of financial reporting is debated below.

3.3.4 Critique of financial reporting

Other reporting systems, such as the balanced scorecard, triple bottom line and sustainability, were developed due to the failure of financial reporting to capture the social and environmental externalities caused by the reporting entity (Deegan & Unerman, 2011). This section elaborates on some of these limitations.

The first criticism is that financial reporting is guided by several assumptions and principles, which hinder entities from incorporating social and environmental aspects of their operations. Financial accounting conventions make it unrealistic to include social and environmental reports in the main financial accounting report (Deegan, 2013). This includes the International Accounting Standards Board's *Conceptual Framework for Financial Reporting* (IASB, 2018), which is regarded as an obstacle for financial accountants to debating about holistic reporting because it states that the purpose of financial reporting is to provide financial information to current and potential investors, lenders and creditors (Deegan, 2013). Gray (2013) also contends that financial accounting caters for an environmental occurrence only if it affects accounting numbers. If only social and environmental aspects are present, then they were ignored until they start to affect the figures.

Financial reporting does not provide for non-financial information on matters pertaining to management quality, customer satisfaction, and environmental and social performance (Barnabe et al., 2013). It also does not make provision for the impact of water pollution on animals and plants since the cost is not fully factored into the water prices of organisations. The use of child labour for cheap production (for example, in cocoa plantations) is likewise not fully factored into raw materials purchased by organisations (Abeysekera, 2013). This means that, if a transaction or event cannot be expressed in monetary terms, then it is not relevant even if investors are interested in it (Sandel, 2012). This is because price is the only measure of value and the market exchange is the only mechanism through which values are regulated (Barnabe et al., 2013).

The second criticism levelled against financial reporting is the double entry principle. Since its documentation in 1494 (see section 3.3.2*)*, double entry was devised for small organisations without complex ownership structures. As a result, it may fail to capture one-sided notional costs, which arise from externalities where costs are allocated to external parties but where there is no direct outflow of resources from the entity.

In line with the double entry concept, the entity principle is also criticised as it regards an entity as distinct from its owners, other organisations and other stakeholders

(Deegan & Unerman, 2011). As a result, any transaction that does not influence the entity is ignored for accounting purposes.

The third criticism raised against financial reporting is the concept of financial materiality. Financial accounting considers a transaction material if it can be measured and there were resource outflows centred on the financial value of that transaction (Deegan & Unerman, 2011). Given the difficulty in quantifying social and environmental information, accountants use their professional judgement to exclude the social and environmental transactions based on their immateriality (Deegan, 2013) even though companies are beginning to recognise social and environmental implications based on their potential to have financial consequences.

The fourth criticism pronounced against financial reporting is that elements (assets, liabilities, equity, income and expenses) of financial reporting are defined in a way that excludes any impact on resources that are shared and not controlled by the entity. These resources include air, ocean and rivers, among others (Deegan & Unerman, 2011). This means that their use or abuse is not considered from a financial reporting perspective and hence no externalities are recognised (Deegan, 2013). It is believed that financial reporting discourages entities from capturing social and environmental impacts by reducing their profits through depreciation, losses on disposal of non-current assets, increased labour and machine hours. This is also regarded as a disincentive for investment in cleaner technologies (Deegan, 2013).

The fifth criticism levelled against financial reporting is the practice of discounting liabilities to their present value, especially those that remain unsettled for over 12 months. Gray et al. (1996) believe that this makes economic sense but not ecological sense because it downplays the importance of a future clean up, thus transferring current environmental problems to future generations (Deegan, 2013).

The other issue is the convention of verifiability, explained by the *IASB Conceptual Framework*, as a reasonable consensus that the record, as presented, is a true and fair view of what it represents (IASB, 2016). Given the non-verifiable nature of externalities, financial accounting is unable to record social and environmental impacts (Deegan, 2013).

The sixth criticism of Financial Reporting is that Corporate Annual Reports (CARs) have become very complex, particularly for users who are not from the accounting discipline (Miller, 2010; Holland, 1998). This questions the value-relevance of CARs, especially for these users (Loughran & McDonald, 2010).

The seventh criticism is the limits of financial reporting in predicting the long-term performance of a company (Barnabe et al., 2013). Financial reports are historical in nature. They report only on past financial performance and position with very little information about the future outlook of an entity. Therefore, users cannot make clearly informed investment decisions based on the historical data alone.

Financial reporting's shortcomings arise from its inability to evolve with the changes in economic contexts. This leads to a diminished level of reliability and clarity (Barnabe et al., 2013). For example, the scandals that rocked corporate governance like Enron in 2001, Parmalat in 2003 and Lehman Brothers in 2008 decreased the confidence of users, especially investors (Barnabe et al., 2013). Users may question the ability of CARs to provide information on an entity's capability to create and sustain value over time. As shown in section 3.2, the shortcomings of financial reporting have contributed to the origin of other reporting systems, namely, the balanced scorecard, triple bottom line, sustainability reporting and <IR> (De Villiers et al., 2014) that are discussed below.

3.4 Balanced scorecard

In 1990, KPMG through its research arm, the Nolan Norton Institute, sponsored a one-year study on multi-companies entitled "Measuring Performance in the Organisation of the Future". The research team comprised David Norton (CEO of the Nolan Norton Institute), Robert Kaplan an academic consultant and representatives from 12 companies (Kaplan & Norton, 1996). The study was driven by the belief that performance measurement systems, which rely on financial measures only, were obsolete and limited opportunities to create economic value (Kaplan & Norton, 1996). The first to be analysed was the "Corporate Scorecard", which was initially used by Analog Devices. The findings of the study were first published in the *Harvard Business Review* (January–February 1992) under the title "The Balanced Scorecard – measures that drive performance" (Kaplan & Norton, 1996) that marks the start of the balanced

scorecard (BSC).

Kaplan and Norton (1996) define the BSC as an internal performance measurement framework that details financial and non-financial information for management and reporting purposes. BSC has four main perspectives represented by questions and the answers to these questions are translated into performance measures. According to Kaplan and Norton (1996), the four questions are:

- ❖ Financial – How do we look to our shareholders?
- ❖ Customer – How do customers see us?
- ❖ Internal business – What must we excel at?
- ❖ Innovation and learning perspectives – Can we continue to improve and create value?

3.4.1 Critique of the balanced scorecard

While the BSC partially addresses some of the weaknesses of financial reporting, it is criticised for the lack of social, environmental and sustainability measures for future performance (De Villiers et al., 2014). Other critics of the BSC contend that the four perspectives do not represent the interests of all stakeholders (Nørreklit, 2000; Kenny, 2003). Some scholars assert that, in the BSC, suppliers, competitors, governments, local communities and the environment receive little attention (Lord, Shanahan & Gage, 2005; Kenny, 2003; Nørreklit, 2000). Nørreklit (2003) posits that BSC perspectives are broad and ambiguous and that personal interpretation can become a source of errors and malfunctions in the context of BSC implementation and use.

Nørreklit (2000) also argues that the cause-and-effect assumption of BSC is questionable and that this undermines the credibility of the performance measurement system. Furthermore, the concept of linking measures to strategy in cause-and-effect relationships was unclear to early adopters of this system (Malmi, 2001). Because of its rigidity and static focus, BSC as a strategic control model, omits and ignores competitive threats, technological developments and strategic uncertainty (Nørreklit, 2000). Kaplan and Norton (1996) recommend having between four and seven performance measures on each of the four BSC perspectives but this is considered too broad and may lead to impaired judgement (Hoque, 2003).

The last criticism levelled against BSC is that the language used is merely persuasive rhetoric as opposed to academic writing grounded in sound argumentation and based on logic and reason (Nørreklit, 2003). Lord et al. (2005) believe that the language is dramatic in order to create enthusiasm and excitement among readers. Use of emotive language, hyperbole, unsound analogy and other stylistic devices leads to the dismissal of the BSC as a common rhetoric found in management texts, which can be equated to propaganda (Nørreklit, 2003). The contention is that the BSC is not really an innovation since there were other similar performance measures, like the French *Tableau de Bord*, and that the BSC's popularity was not because of its credibility, but rather due to its emotive language. The second reporting system is the triple bottom line (TBL) presented below.

3.5 Triple bottom line

The second framework, which also emerged to address the shortcomings of corporate financial reporting, is the triple bottom line (TBL). This external reporting framework acknowledges the interaction of three key interest areas, economic success, environmental quality and social equity. The framework, established by John Elkington, became popular in the 1990s (De Villiers et al., 2014).

3.5.1 Critique of the triple bottom line

TBL has been criticised because companies tend to refer to social and environmental disclosures as "sustainability disclosures" even though there was only a symbolic connection to the term (Brown, Dillard & Marshall, 2009). TBL has also been criticised for being badly structured, a poorly defined measure of reality, not focusing on improving or clarifying key measures of corporate well-being and not presenting interrelationships between the major three components of corporate health (Sridhar, 2012). All the criticisms point to the fact that TBL failed to offer an internationally recognised reporting system that would replace or complement financial reporting. The third reporting system is sustainability reporting that is discussed below.

3.6 Sustainability reporting

Sustainability reporting, also called corporate responsibility reporting (CRR) or corporate social responsibility (CSR), emerged when companies reported on social

and environmental disclosures in an unsystematic manner (KPMG, 2013). Information provided under sustainability reporting relates to an entity's conduct regarding environmental, community, employee and consumer issues. The major intention of sustainability reports is to inform a variety of stakeholders about the social performance of an entity (Barnabe et al., 2013) due to the growing concerns for climate and environmental change, poverty, increased disparities between societies and the tensions brought about by social inequalities. Sustainability reporting is motivated by reputational considerations (Barnabe et al., 2013) driven by companies' desire to improve their accountability reputation increasing their market favourability.

The Global Reporting Initiative (GRI), founded in 1997, developed and popularised sustainability reporting, which is classified in this study as the third reporting system. The GRI released its first sustainability guidelines in 2000 and published its reporting guidelines (G4) in 2013 (Berndt, Bilolo & Muller, 2014). The G4 guidelines are divided into two main documents: the "Reporting Principles and Standard Disclosure" and the "Implementation Manual". Each company is given an opportunity to prepare its guidelines in accordance with the "Core Option" or the "Comprehensive Option" (Global Reporting Initiative [GRI], 2013). The GRI framework is founded on two fundamental pillars, namely, the reporting principles and the elements. The reporting principles are stakeholder inclusiveness, balance, comparability, accuracy, timeliness, clarity and reliability. The GRI elements are strategy and analysis, organisational profile, identified material aspects and boundaries, stakeholder engagement, report profile, governance and ethics and integrity. Companies disclose how they identify, analyse, and respond to economic, environmental and social impacts relating to environmental, social or governance performance through the Disclosures on Management Approach (Barnabe et al., 2013).

For companies to be seen to cater for all stakeholder interests, there was a notable increase in the number of companies that adopted these guidelines. According to the KPMG International Survey of Corporate Responsibility Reporting (2013), 71% of the surveyed 4100 companies issued corporate responsibility reports as compared to 64% of the 3400 companies surveyed in a similar survey in 2011. The survey also notes that over 90% of the world's largest 250 companies now issue a corporate responsibility report, and over 80% use the G4 guidelines.

3.6.1 Critique of sustainability reporting

Sustainability reporting (SR) is credited for bringing the social and environmental aspects into the reporting framework. However, several criticisms have been levelled against it. Two separate reports, namely, the financial report and the sustainability report are prepared under this system but these two reports are standalone reports, isolated from each other (Abeysekera, 2013). Other disadvantages presented against sustainability reporting are that it focuses only on the short term, disclosures are narrow, the reporting system is rules bound, the reports are long and complex, some of the sustainability reports are paper based and it focuses only on the past and on financial matters (Berndt et al., 2014).

Another criticism levelled against sustainability reporting is about the low quality of reports and concerns related to the culture of sustainability practices within organisations (Gray, 2001). In fact, sustainability reporting has been criticised as a public relations "window dressing" exercise, which is not embedded in the organisational conventions, customs and laws (Gray, 2010). Adams (2013b) affirms that, on a global scale, sustainability reporting has been inadequate, in assisting management to manage performance and providing an account of performance to stakeholders. In some cases, Adams (2013b) notes, there are deliberate attempts to hide or deceive and there may be reluctance to disclose activities in which the entity is involved. The absence of norms, regulations and standards, and the unreliable measurement, low mobilisation of practices, incompleteness, and poor quality of the reports are some of the reasons why sustainability reporting has failed to become mainstream corporate reporting (Strong, 2014). Assessing sustainability is a challenging and highly political endeavour which the mainstream accounting is ill-equipped to deal with, particularly in balancing the ideological conflicts between profit-maximisation and human well-being (Brown & Dillard, 2014).

There are three sustainability dimensions, namely, the financial dimension, the social dimension and the environmental dimension (Barnabe et al., 2013). SR is not just a complex but is also an elusive construct that is characterised by potential contradictions (Gray, 2010) that emanate from the underlying differences between these sustainability dimensions. Contradictions arise when an entity attempts to

implement all the dimensions simultaneously. This tension comes from the different needs of stakeholders, as shareholders want profits while society wants to see the entity becoming more socially responsible.

When an entity pursues environmental and financial dimensions of sustainability, there is also a possibility of contradiction. Even though effective environmental management may contribute towards increased production efficiency, cost reduction, a better market reputation and financial performance (Ambec & Lanoie, 2008), high environmental performance comes with higher compliance costs and investments for re-engineering the consumed resources. This may limit opportunities for growth and competitive advantage that ultimately affects financial performance negatively. Tension between financial performance and environmental performance may occur when entities operating on a large scale require technologies to increase resource consumption to the detriment of the environment. There could also be some contradiction if an entity pursues the social and environmental dimensions of sustainability, for example, when a solution for a more effective management of environmental resources is in conflict with social needs, or a proposed solution to social problems is in conflict with the need to preserve natural resources (Barnabe et al., 2013).

The other shortcoming raised for SR is that it lacks a common worldwide policy for preparing sustainability reports (Gray, 2010). Proponents for a mandatory SR regime believe that it will change a negative corporate culture characterised by the production of incomplete voluntary reports, incomparable sustainability reports, and sustainability reports that do not present negative performance and news. The supporters of a voluntary SR regime, on the other hand, posit that making SR compulsory will fill the gap between regulators and the industry, minimise the incentives to innovate and would ignore differences between industries (Barnabe et al., 2013). Having a widely accepted standard SR disclosure will provide guidance to the preparation of sustainability reports and will make sustainability reports more comparable.

Although sustainability reporting brought a broadened accountability in the form of annual reports, it failed to become mainstream corporate reporting. This is because reporting initiatives lack coherence with the long-term objectives of the organisations

and were usually presented as unconnected activities performed within organisations (Abeysekera, 2013). A new reporting system was developed to address some of the shortfalls of sustainability reporting particularly regarding the value-creation process, value-creation for the organisation and for others, longer-term strategic planning and a focus on the "six capitals" (Adams, 2013b). The fourth reporting system, which originated from the limitations of financial reporting, is <IR> that is presented below.

3.7 Integrated reporting

Integrated Reporting (<IR>) is defined as

> a process founded on integrated thinking that results in periodic IARs by an organization about value creation over time and related communications regarding aspects of value creation (IIRC, 2013).

<IR> pertains to how an entity will thrive in the short, medium and long-term, not only focusing on financial profits and the providers of capital, but rather on the environment and all stakeholders (Adams, 2013b). The focus of <IR> is on meeting the needs, not only of shareholders, but also those of stakeholders by articulating how value was created and sustained in the future for the entity itself and the society affected by it. The <IR> framework defines an IAR as

> a concise communication about how an organisation's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value in the short, medium and long term.

Analysis of the extant literature reveals that <IR> started in 1999 with the release of the "Value Reporting Framework" by PWC. This was followed by the release of the first IAR in 2002 by Novozymes, a Danish enzyme company (De Villiers et al., 2014; Flower, 2015). These two events led to debate and discussions on <IR>. The development of <IR> is summarised in Table 3.1 below. Dumay, Bernadi, Guthrie and Demartini (2016) ascribe the origins of <IR> to 1994 with the release of South Africa's first King Code of Corporate Governance (King I) through King II, King III, King IV and ultimately to 2010 when the IIRC was established (Flower, 2015; Adams, 2013b).

Table 3.1: Integrated Reporting Worldwide

Year	Company	Registered	Sector	Aspects

	Name	**Office**		
2002	Novozymes	Denmark	Biotechnology	Financial, environmental and social data
2003	Natura	Brazil	Cosmetics	Financial and ESG aspects
2004	Novonordisk	Denmark	Pharmaceuticals	Financial, social, ethical and environmental aspects
2006	Aracruz (Fibria)	Brazil	Pulp	Social, financial, economical, and environmental aspects
2007	BASF	Germany	Chemicals	Economy, society, environmental and economic aspects
2007	Alstom	France	Power generation	Financial, environmental and industry regulation
2007	Aviva	United Kingdom	Insurance	Financial and non-financial aspects
2007	BT	United Kingdom	Telecommunication	Financial and non-financial data
2007	HSBC	Hong Kong	Banking	Focused more on consumer related activities
2008	Novartis	Switzerland	Pharmaceuticals	Financial, economic and societal aspects
2008	Philips	The Netherlands	Electronics	Financial, social and environmental aspects
2008	United Technology	USA	Conglomerate	Financial and ethical performance
2008	American Electric Power	USA	Electric Utilities	Financial, social, and environmental aspects
2008	Anglo Platinum	South Africa	Platinum	Financial, social and environmental aspects
2009	Rabobank	The Netherlands	Banking	Financial and non-financial aspects
2009	TNT Logistics	The Netherlands	Transportation	Financial and non-financial aspects

Source: Eccles and Kazus (2010)

(No documented developments took place in 2005). This study challenges the <IR> discourse by investigating the history of financial accounting from 5000 BC when it was first developed in Babylon, out of the need to account for the ever changing needs of stakeholders, and relating the subsequent development of financial reporting, BSC, TBL, SR and <IR> as was presented in the previous sections.

<IR> combines the elements of information being reported which include financial reports, management commentary, governance, remuneration and sustainability reports by showing connectivity between the elements mentioned. Furthermore, <IR>

explains how organisations create and sustain value in the short, medium and long term (Abeysekera, 2013). The ultimate aim of <IR> is to show the connections between the capitals, value creation for the organisation and others, and the value creation process in the context of investment decision-making processes. This gives a clear view of the entity's strategy and allows long-term quantifiable risks or opportunities to be taken into consideration (Brown & Dillard, 2014; Barnabe et al*.,* 2013). While <IR> is primarily intended to cater for the private sector, particularly for-profit organisations, it can be adapted to suit the public sector and not-for-profit organisations.

An entity that produces an IAR is compelled to apply all the key requirements as identified in the <IR> framework. The following section discusses these key elements. The only exceptions to the necessary requirements are when reliable information is unavailable, when there are legal hindrances to disclosing certain information or when disclosure of material information may lead to significant competitive harm (Dumay et al., 2016). However, in cases where information is not available or where information may not be released due to legal hindrances, the entity must present in an IAR the nature of information that was omitted, reason for the omission and indicate the steps being taken to obtain the necessary information (IIRC, 2013).

The last requirement is the responsibility for an IAR. This means having a statement acknowledging the IAR preparers' responsibility to ensure integrity of the IAR. Responsibility also entails an admission by the IAR preparers that they applied their collective mind in preparing and presenting the IAR and that the IAR is presented in accordance with the <IR> framework. In the absence of this statement of "responsibility for an integrated report", the preparers have to explain their role in the preparation and presentation of an IAR. Furthermore, preparers need to report the steps being taken in order to have this statement in future reports and the time frame for doing so, which is recommended to be no later than the organisation's third IAR that makes reference to the <IR> framework (Soh, Leung & Leong, 2015).

The Content Elements, Fundamental Concepts and Guiding Principles of the <IR> framework are discussed below.

3.7.1 Content elements

An Integrated Annual Report (IAR) must have the nine content elements: organisational overview and the external environment; governance; business model; risks and opportunities; strategy and resource allocation; performance; outlook; basis of preparation and presentation; and general reporting guidance (IIRC, 2013). These are presented below. The first to be analysed is organisational overview and the external environment.

3.7.1.1 Organisational overview and the external environment

The IAR must indicate what the entity does, specify the circumstances under which it operates and provide its mission and vision. The context relates to the entity's culture, ethics, values, ownership, operating structure, principal activities, main markets, market positioning, the competitive landscape and the significant factors affecting the environment. These are summarised in Figure 3.3 below.

Figure 3.3: Significant factors affecting the external environment
Source: De Villiers, Hsiao & Maroun, 2017

Political environment relates to the political situation in the countries where the organisation operates, and the influence of other countries on the entity's operational activities. Peace/political stability or political instability/war are the major characteristics that define the political environment. Examples include capitalism, communism, democratic systems and dictatorships.

Economic environment pertains to the macro and micro economic fundamentals such

as industry trends, globalisation and economic stability. Market forces, such as weaknesses and strengths of competitors and customers, are taken into consideration (IIRC, 2013).

Social environment is denoted by variables like population and demographic changes, poverty, health, human rights, educational systems and collective values while the technological environment involves the rate at which technology changes and how the entity adapts to those changes (Cheng et al., 2014).

The legal environment refers to the legal jurisdiction in which an entity operates. Legal systems may be liberal and friendly or tough, rigid and difficult to operate within. As such an entity, must familiarise itself for easier navigation.

Environmental challenges relate to issues like climate change, loss of ecosystems and scarcity of resources due to the growing numbers of consumers. In addition, key quantitative information, such as the number of employees, total revenue, countries in which the entity operates and the changes (comparative amounts) from prior years, is required.

The IAR also has to show how these significant factors influence the quality, affordability and availability of capitals utilised by the entity (Adams, 2015). "Governance", which is the second element, is presented below.

3.7.1.2 Governance

Governance relates to the structure of governance and its ability to create value in the short, medium and long-term. Leadership structure, skills and diversity, gender, competencies and experience, and backgrounds are some of the items to be reported on in an IAR (Simnett & Huggins, 2015). Governance entails indicating measures taken by the leadership to steer the entity's strategies in a particular a direction (IIRC, 2013), and whether the entity is adhering to or exceeding the governance and legal requirements. Strategies to promote innovation and creativity, how an entity's culture, ethics and values are reflected in the use of capitals, and how remuneration and incentives create value are some of the requirements that have to be prepared and presented in the IAR (Soh et al., 2015; IIRC, 2013). The "business model" is discussed next.

3.7.1.3 Business model

A business model is defined as a system through which inputs are transformed into outcomes and outputs from implementing business activities with the ultimate aim of fulfilling the entity's strategic purposes and creating value in the short, medium and long term (IIRC, 2013) are specified. The inputs relate to the main capitals and the nature and magnitude of trade-offs that influence selection of the capitals. Haller and Van Staden (2014) argue that, when presenting their business models, entities need to consider the following business activities:

❖ how the entity distinguishes itself in the market

❖ how the business model is adapted to change

❖ the extent to which the business model relies on revenue generation after the initial point of sale

❖ how the organisation approaches the need to innovate

❖ how the entity contributes to programmes like employee training and relationship management.

The above-mentioned business activities are presented depending on their materiality.

Outputs, which can be internal or external, may be in the form of by-products and waste and have to be shown in the IAR. Internal outcomes include employee morale, organisational reputation, revenue and cash flows. On the other hand, external outcomes include tax payments, customer satisfaction, brand loyalty, and the social and environmental effects of the entity. When reporting on external outcomes, entities consider capitals more broadly than only the capitals under the entity's control.

Outcomes may be positive or negative. Positive outcomes denote a net increase in the capitals while negative outcomes denote a net decrease in the capitals with the ultimate effect of diminishing value (Coulson, Adams, Nugent & Haynes, 2015). If an entity has multiple business models, for instance, where the entity operates in different markets, the requirement is a clear disaggregation of the business models and a commentary outlining the connectivity of the business models (Adams, 2015).

The entity must also balance disclosure and complexity. The business model must

identify the major elements making up the business model using a diagram. Logical narrative flow, indicating the circumstances under which the entity operates needs to be highlighted. Lastly, critical stakeholders, and the connection of the business model with other content elements (Soh et al., 2015) must be shown. "Risks and opportunities" is the next content element to be addressed.

3.7.1.4 Risks and opportunities

The entity has to show the major risks that threaten the entity together with the opportunities, which are available to the entity, in its IAR. The risks and opportunities that influence the entity's continued existence and that determine the availability and affordability of capitals in the short, medium and long term must also be outlined. The IAR must also show the sources of these risks and opportunities, which may be internal or external, or a blend of the two (Barnabe et al., 2013; IIRC, 2013).

Another requirement is the entity's assessment of the likelihood that the risk or opportunity will materialise. In the event of a risk or opportunity occurring, the magnitude of its effect needs to be presented. Furthermore, the steps being taken to mitigate against the risks need to be highlighted and the strategic objectives, policies and targets, which would enable the creation of value from opportunities available to the entity, have to be identified (Cheng et al., 2014). The next content element to be addressed is "strategy and resource allocation".

3.7.1.5 Strategy and resource allocation

Strategy entails the entity's short, medium and long-term objectives to be achieved in the process of value creation. The tactics and strategies to be implemented to achieve the set objectives must be clearly outlined in the IAR. In terms of resource allocation, the entity must have plans on how to implement the strategies. There must also be a plan to measure the achievements and target outcomes in the short, medium and long term (IIRC, 2013). The link between the organisation strategy and the resource allocation plan, how these plans connect with the business model, how business plans are influenced by the external environment and how business plans affect the relevant capitals (De Villiers et al., 2017) must be shown. Lastly, there is need to outline how the entity has competitive advantage over other entities, highlighting the role of innovation, how the organisation utilises human capital to its advantage, and the extent

to which the environment and social aspects have been affixed in the entity's competitive advantage strategy (Barnabe et al., 2013). "Performance" is the next content element to be addressed.

3.7.1.6 Performance

An IAR comprises both qualitative and quantitative indicators about the performance of an entity. Quantitative indicators may relate to targets, risks and opportunities, their significance and implications, while explaining methods and assumptions used in compiling them. The entity's net effects on capitals, which could be increases, decreases, transformations or preservation, are also discussed under this heading (Adams, 2013b). It also includes how the entity has responded to various key stakeholders' interests and needs, the relationship between past performance, current performance and future performance, and connectivity between financial performance and performance is also reported on under this section. In cases where regulations have had a significant effect on performance or where an entity failed to comply with laws may also be presented under performance (Soh et al., 2015). "Outlook" is the next content element to be addressed.

3.7.1.7 Outlook

The IAR shows the anticipated changes over time and avails information constructed on analysis. The information may include the entity's expectations about the external environment in the short, medium and long term, and how that prevailing environment may affect the entity. There will also be presentation of how an entity is equipped to respond to challenges and uncertainties that will arise in this process (Del Baldo, 2017). Expectations, aspirations and intentions, potential implications concerning future financial performance, the external environment, risks, opportunities, availability of affordable capital, availability of skilled labour or natural resources, including how key relationships are managed, are some of the aspects to be included in the outlook section of the IAR (IIRC, 2013). The next content element to be addressed is "basis of preparation and presentation".

3.7.1.8 Basis of preparation and presentation

There has to be a description of the basis of preparation and presentation of the IAR,

which includes a high-level summary of the entity's process of determining materiality. This process recognises relevant issues and evaluates their importance, and identifies the role of those charged with governance and key personnel in the prioritisation of key issues (Veltri & Silvestri, 2015).

Another requirement concerns a description and determination of the reporting boundary, how the reporting boundary has been established, and the risks, opportunities, outputs and outcomes attributable to the financial reporting entity, other entities and stakeholders. An inability to identify all risks, opportunities and outcomes and the unavailability of reliable data may hinder a full disclosure of the nature and extent of information presented in an IAR. A summary of the significant frameworks and methodologies used to quantify material matters should be included in the report (Simnett & Huggins, 2015). These frameworks may include the International Financial Reporting Standards (IFRS) or the industry based framework to evaluate risks. Lastly, if information in the IAR is similar or was prepared from other information prepared by the entity, such as financial statements, environmental reports or sustainability reports, then that must be indicated under the summary of frameworks and methods (De Villiers et al., 2014). Attention is now drawn to the "general reporting guidance".

3.7.1.9 General reporting guidance

General reporting has to take care of the disclosure of material matters and capitals; timeframes for short, medium and long term; and the aggregation and disaggregation of relevant information. Disclosure of material matters entails considering the nature of material information by explaining that information and the effect it has on the business model or the capitals (Eccles & Serafeim, 2014). Moreover, quantitative indicators, like the key performance indicators (KPI), help in the comparability of IAR. The IIRC (2013) recommends that the quantitative indicators:

- ❖ be relevant for the entity
- ❖ be consistent with indicators used internally
- ❖ be connected with other relevant information
- ❖ be presented for several periods
- ❖ be presented against previously set targets

❖ be consistent with set industry benchmarks or regional standards

❖ be reported consistently over successive periods

❖ be presented with qualitative information, which explains the measurement methods and the reasons for significant variations from set targets or benchmarks, whether industrial or regional (IIRC, 2013).

Disclosure about capitals must focus on whether the net effects on capitals have an effect on the value-creation ability of an entity and not necessarily on the ownership of capitals. The entity presents the factors that affect the availability, quality and affordability of capitals particularly where capitals are of a non-renewable nature and may have an effect on the long-term survival of the entity (Eccles & Serafeim, 2014). If it is not possible or meaningful to quantify movements between capitals, qualitative disclosures are suggested in order to explain those movements in terms of capital availability, quality and affordability. The <IR> framework further recommends that IARs must disclose the interdependencies that are considered in determining the reporting boundary and the important trade-offs that influence value creation. Trade-offs may be between capitals owned by the entity and capitals owned by others or even between components of a capital (Coulson et al., 2015)

Periods for short, medium and long-term preparation and presentation of an IAR are decided upon by the entity since there is no prescribed period in that regard. However, the future time dimension for <IR> is ordinarily longer than for other forms of reporting (Eccles & Serafeim, 2014). Periods differ due to differences in industry or sector requirements, or due to the nature of outcomes. The length of each period influences the nature of information presented in IARs thus shorter term issues may be easily monetised or quantified whereas longer term issues are more likely to be qualitative due to the uncertainties around future information (Adams, 2013b; IIRC, 2013).

Aggregation and disaggregation pertain to whether information has to be combined or separated since the word "aggregate" means combining separate items or sets of data while "disaggregate" means separating something into its component parts (Simnett & Huggins, 2015). Aggregation may lead to a loss of meaning and a failure to identify poor or strong performance in some areas, whereas disaggregation may negatively

affect levels of comprehension of information. There is a need to strike a balance between aggregation and disaggregation so that there is no over-aggregation or over disaggregation. Having analysed the content elements of <IR>, attention is turned to the fundamental concepts underlying the reporting system (Soh et al., 2015; IIRC, 2013). "General reporting guidance" is the last content element to be presented. The next section is that of "fundamental concepts", which underpin <IR>.

3.8 Fundamental concepts

There are three main fundamental concepts, value creation for the organisation, the capitals, and the value creation process (Adams, 2013b), which inform and reinforce the requirements as outlined by the <IR> framework.

3.8.1 Value creation for the organisation and for others

Value created by an entity is shown through an increase, decrease or transformation of capitals because of the entity's activities and outputs. Positive externalities may increase the value created for an organisation while negative externalities decrease value created for organisations (Deegan, 2013). Information about material externalities can assess their effects, whether positive or negative, and this informs the allocation of resources accordingly. Value is not only created for the entity, but also for stakeholders and society. The creation of value is not only initiated from within the entity, but also beyond the entity through the influence of the external environment (Eccles & Serafeim, 2014).

Value may be created through relationships with outside stakeholders such as sales to customers, customer satisfaction, suppliers' preparedness to trade with the entity, supply chain conditions or legal requirements, and initiatives taken by business partners to enhance the reputation of the organisation (IIRC, 2013). Value created for the entity is linked to the value created for others. This means that providers of capital are not only interested in the value created for the entity, but they are also interested in the extent to which value created for the entity will affect the value creation for other stakeholders (Adams, 2015). The second fundamental concept is that of "capitals" and is presented below.

3.8.2 The capitals

Capitals are considered to be stocks of value that may increase or decrease in value, transform from one form to the other or preserve their values (Coulson et al., 2015). Capitals are named by the IIRC (2013) as financial capital, human capital, intellectual capital, manufactured capital, natural capital, and social and relationship capital.

The value of capital may increase when an entity makes a profit or decrease when an entity makes a loss. Also, the quality of human capital improves when employees become more educated and trained through continuous professional development programmes. Preservation of financial capitals was when an entity is breaking even, where neither a profit nor a loss is made (Haji & Hossain, 2016). Transformation of capitals is realised when a form of capital reduces in order to increase another form. This may manifest as an improvement in human capital through employee training as financial capital is reduced through payment of training costs, while human capital improves through higher qualifications and new skills. Flower (2015) and Adams (2015) express reservations because of limited disclosure requirements concerning the transformation of capitals. They question the practicability of attaching values on transformation of social and relationship capital, and natural capital.

In the light of the above, note, firstly, that the examples given for increases, decreases, preservation or transformation of capitals are just simplified examples, which do not resemble reality. In a complex business world, decreases, increases or transformation of capitals are more sophisticated and involve a far much wider mix of capitals.

Secondly, this study challenges the use of the term "value creation" in cases where capitals decrease or where capitals are preserved (Eccles & Serafeim, 2011). It is therefore proposed that the term "value creation" be limited to cases where capitals increase in values or where capitals are positively transformed. The researcher proposes that, in cases where capitals decrease in value or are transformed negatively, then a more appropriate term such as "value diminution" be utilised and "value conservation" is proposed in cases where capital values are preserved (Adams, 2015). Having presented the flow of capitals, attention is now turned to capital typologies (arranged in alphabetical order) and each will be expounded below, starting with financial capital.

3.8.2.1 Financial capital

This is the pool of funds available to be used for either providing services or the production of goods. The pool of funds is usually created from equity financing, debt financing, generated through investments and operations, and, in some cases, through grants. In terms of reporting, this capital is established through corporate financial reporting, which is guided by the IFRS. Furthermore, extensive extant literature exists that covers financial reporting through history (see section 3.3) (Adams & Simnett, 2011).

3.8.2.2 Human capital

Human capital refers to people's experiences, capabilities, competencies, levels of education, training and development, and motivation to innovate new products or new methods of production (Eccles & Serafeim, 2014). Support for an entity's ethical values, governance framework and risk management approach, also falls under human capital. Human capital may further encompass knowledge, skills, technical ability, personal characteristics like intelligence, energy, attitude, reliability, commitment, ability to learn, aptitude, imagination and creativity, desire to share information and participate in a team, and to focus on the goals of the organisation (Fitz-enz, 2000).

Human capital is exclusively viewed from an entity's point of view. The entity believes that people have no intrinsic value (Flower, 2015) but their value depends on the contribution they make to the entity's success. People who are not included in an entity's business model are excluded from this viewpoint. An example, given by Flower (2015), is of people living in a local community who are killed by poisonous gases released by an entity. The death of these human beings clearly indicates a decrease in human capital. However, according to IIRC (2013), this decrease would only be reported if it had an impact on the future profitability of the entity, for example, if they were employees, if the entity suffered damage to its reputation that affects future sales or if the entity incurred costs in paying compensation or fines (Flower, 2015).

3.8.2.3 Intellectual capital

This capital is understood as the knowledge-based intangibles of the entity, which

include intellectual property. More commonly, intellectual property is understood as intangible creations of the mind, such as patents, copyrights, software, trademarks, industrial design rights, geographical indications, rights and licences. Other than intellectual property, intellectual capital further encompasses organisational capital, which includes systems, tacit knowledge, protocols and procedures (Adams & Simnett, 2011).

3.8.2.4 Manufactured capital

This type of capital relates to human-made objects, which are at the disposal of the entity to provide services or produce goods. While, in a majority of cases, manufactured capital may be created by other organisations; it also includes assets created by the entity for sale or for its own use. This capital is easily captured in the financial report particularly in the statement of financial position (Adams, 2013b).

This capital includes buildings, equipment, motor vehicles and infrastructure. Infrastructure relates to roads, ports, bridges, and waste and water treatment plants. Manufactured capital also includes objects that are not owned by the entity like public roads, which become manufactured capital to the extent to which they are inputs to the entity's production process. Objects that are not inputs to the entity's production process (e.g. hospitals and schools) are excluded but if hospitals and schools are damaged because of the entity's operations through externalities like pollution, then such damage is not reported in the entity's IAR (Flower, 2015).

3.8.2.5 Natural capital

Unlike manufactured capital, which is human-made, natural capital relates to all renewable and non-renewable environmental resources that are utilised by entities in the course of providing services and goods. Land, air, water, minerals, forests, biodiversity and eco-system health are examples cited by the IIRC (2013). Depending on the nature of an organisation, an entity's levels of interaction with natural capital may be limited or indirect. In other words, not all capitals are relevant to all organisations. An example is of non-mining companies, which do not have a direct interest in minerals since their day-to-day operations do not require minerals. As a result, non-mining companies will not be compelled to report on the value creation of minerals in their IARs (Adams, 2013b).

The IAR covers natural capital to the extent that it is an input to the entity's production process but the IAR does not cover the entity's impact on the broader environment. For example, an entity releases vast amounts of greenhouse gases, which lead to climate change, which has serious negative effects, which includes a rise in sea level that ultimately leads to the inundation of many islands. The disappearance of islands is a loss of natural capital. However, the IIRC says that an entity can report on the disappearance of these islands only to the extent to which the entity depended on these islands. It appears the IIRC requires an entity to report on the effect of an entity's activities on stakeholders, on society and on the environment only to the extent that there is material impact on its own operations (Flower, 2015).

3.8.2.6 Social and relationship capital

This mainly entails the institutions and relationships within and between communities. This is how an entity relates to different stakeholders and how the entity endeavours to enhance the individual and collective well-being of different stakeholders and the community at large. Social and relationship capital comprises shared norms, common values, behaviours, key stakeholder relationships, intangibles associated with the reputation of an entity and the trust and willingness to engage with all stakeholders. Social and relationship capital represents an entity's unsigned social licence to operate, which can be clearly understood in the light of the legitimacy theory (IIRC, 2013).

When entities prepare their IARs, they are not necessarily required to categorise their capitals as in the above explanation. Rather, this categorisation is presented as a guideline to ensure that organisations consider all forms of capital they affect. Another reason is to illustrate the importance of the concept of capitals for value creation. However, the notion that capital categories are presented as merely guidelines is criticised under section 3.11, "Critique of Integrated reporting" because entities in the same industry that affect similar capitals may report differently and this complicates the comparability of IARs (Adams, 2013b). The third and last fundamental concept, presented below, relates to the "value creation process".

3.8.3 The value creation process

The value creation process is made up of three components, namely, the inputs, the

business model and the outcomes. The inputs are the six capitals, which are financial capital, human capital, intellectual capital, manufactured capital, natural capital, and social and relationship capital (Adams, 2017). These are fed into the business model where business activities will increase, decrease, transform or maintain them. Business activities entail planning, designing and manufacture of products, innovation for new products, better use of technology and substituting inputs to minimise adverse environmental and social effects. In the process of performing business activities within the business model, the entity operating within its mission and vision has to be aware of risks and opportunities both inside and outside the entity.

Furthermore, those charged with governance must create a favourable environment to enable value creation. The entity's strategies identify the measures to mitigate risks and maximise opportunities through an improved resource allocation mechanism. Measurement and monitoring mechanisms have to be established in order to evaluate performance and to aid in decision-making. Ultimately, a review of the entity's outlook is necessary to refine or improve all the non-performing elements (IIRC, 2013).

The value creation process is presented in Figure 3.4 below.

Figure 3.4: Value creation process
Source: IIRC (2013:13)

The outputs and outcomes are released in the form of increases, decreases, transformations or preservation of capitals. A particular external environment either positively or negatively influences value creation. The external environment comprises the economic conditions, technological changes and the ability to adapt, societal issues and environmental challenges.

In summary, the value creation process is made up of three components, which are inputs in the form of capitals (Adams, 2017). The capitals are then fed into the second aspect, which is the business model that is made up of business activities that strive to minimise risks and increase opportunities, improve governance structures, improve strategy and resource allocation, and improve performance and business outlook. The third aspect was the outputs and outcomes in the form of capitals. Ultimately, the outputs and outcomes become inputs in the value creation process cycle (Adams, 2015). Having analysed the three fundamental concepts, the guiding principles, which

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inform the preparation and presentation of IAR, are presented below.

3.9 Guiding principles

The <IR> framework identifies seven guiding principles, which guide organisations in the preparation and presentation of Integrated Annual Reports (IARs). Guiding principles inform the content and presentation of information in an IAR. Since <IR> is on an "apply or explain" basis, preparer judgement is required in applying the guiding principles individually or collectively. These guiding principles are expounded below beginning with "strategic focus and future orientation".

3.9.1 Strategic focus and future orientation

The IAR must avail the entity's strategies put in place to enable it to create value in the short, medium and long term. Strategies relate to how the entity will deal with risks and opportunities, which flow from the entity's business model and market position. Those charged with governance have to indicate their views regarding, the relationship between past and future performance; how the entity balances short, medium and long-term interests; and how the entity has learned from past experiences in determining future strategies. Lastly, the entity has to articulate how the continued availability, quality and affordability of relevant capitals contribute to the entity's ability to achieve its strategic endeavours in future and to create value in the short, medium and long-term (Busco, Quattrone & Riccaboni, 2013). Attention will now be turned to the next guiding principle, which is "connectivity of information", as articulated below.

3.9.2 Connectivity of information

An IAR must show how the entity elements are interrelated and how value is created from the interrelatedness and dependencies of these elements. Connectivity is expected for the content elements that may include an analysis of the current resource allocation model and how resources were allocated in future. This analysis aids in attaining targeted performance; information about mitigating against new risks and taking advantage of opportunities; and linking the business model with the external environment, which can be summed up as the acronym PESTLE (political, economic, social, technological, legal, environmental) (De Villiers et al., 2017). Connectivity is required for the ways the past informs the present and future activities of an entity.

This past-to-present and present-to-future analysis helps in analysing current capabilities and assessing the quality of management.

Connectivity is also expected on the financial and other relevant information. This could relate to expected growth and developmental policies; cost reduction and environmental and societal policies; and revenue growth on customer satisfaction and business reputation. The entity is also expected to show the connectivity between quantitative and qualitative information with the use of KPIs (De Villiers et al., 2014). Connectivity is also expected for management information, board information and information reported externally. The other element to display connectivity is capitals where interdependencies, trade-offs and how changes in the availability, quality and affordability affect the ability of an entity to create value. There is an expectation that an IAR has to be connected to the other communications issued by the entity to minimise having an IAR in isolation but rather in conjunction with information from other business communications (IIRC, 2013).

Connectivity and usefulness of an IAR is enhanced when it is logically constructed, well presented, well structured, understandable, and written in clear language. It also needs effective navigation devices like clearly delineated sections and cross-referencing. The final enhancement technique is the embrace of information and communication technology (ICT) in order to improve the ability to search, access, customise, re-use and analyse information (Veltri & Silvestri, 2015). The next guiding principle to be addressed is "stakeholder relationships".

3.9.3 Stakeholder relationships

The entity must show the nature and quality of its relationships with its major stakeholders by giving a clear indication of the extent to which the entity responds to their different needs. This requirement emanates from the realisation that value is not created within an entity alone, but rather is created through relationships with others (Eccles & Serafeim, 2014). Stakeholders provide important information regarding economic, social and environmental matters, which influence the entity's value-creation potential (Lueg et al., 2016). Stakeholders' views help the entity to perceive how stakeholders understand value, identify material matters including risks and opportunities, and develop and evaluate strategies, which suit the majority of

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stakeholders; and implement strategic responses to the material matters (Barnabe et al., 2013).

Stakeholder engagement is also indicated under this requirement of stakeholder relationships. Engagement may be that which occurs regularly as the entity conducts its day-to-day operations or it may be engagement for a particular purpose. By also showing how an entity makes decisions regarding stakeholders' needs, the entity becomes more transparent and more accountable (Cheng et al., 2014). Accountability and transparency are the tenets for trust and resilience between the entity and its stakeholders. Accountability compels the entity to use the capitals affected by its business model and business activities responsibly. Accountability may extend to an entity having an ethical responsibility towards the capitals. In other words, accountability is guided by stakeholder expectations (Veltri & Silvestri, 2015). After, addressing "stakeholder relationships", attention is turned to the next guiding principle, which is "materiality".

3.9.4 Materiality

Materiality entails identifying matters that have the potential to influence the value-creation ability of an entity. The most material matters will get priority in terms of disclosure. The process does not select between positive and negative matters including risks, opportunities, favourable and unfavourable performances. This determination applies for both financial and non-financial information. For its own effectiveness, the process of determining material issues has to be embedded in the entity's management plan (Lai, Melloni & Stacchezzini, 2017).

Emphasis is placed on the fact that matters are not classified as material or immaterial on the basis that an entity does not wish to address them or does not know how to deal with them, but rather on the basis of their effect on the entity's ability to create value. Therefore, the magnitude of the effect on the value-creation potential determines the materiality of an issue. The magnitude is construed in the light of quantitative factors, qualitative factors, financial and regulatory perspectives, period and internal or external effect. Once all-important matters are populated, the more important ones were given priority. Preparers of IARs use their judgement when identifying materiality related issues to disclose in the IAR (Adams & Simnett, 2011).

Figure 3.5: Stakeholders considered in determining a reporting boundary
Source: IIRC (2013:20)

Figure 3.5 shows the stakeholders from inside and outside the entity taken into consideration when determining the reporting boundary of an entity. Materiality also extends to the concept of the reporting boundary mentioned above. There has to be a determination of the boundary for an IAR, particularly for financial reporting purposes, and risks, opportunities and outcomes attributable to other stakeholders beyond the financial reporting entity (Lai et al., 2017), which have material influence over the entity's ability to create value (Barnabe et al., 2013). The financial reporting entity identifies the relevant transactions, which have to be included in the financial report for subsidiaries, joint ventures and associates. After "materiality", "conciseness" is the next guiding principle to be addressed.

3.9.5 Conciseness

An IAR should contain the entity's strategy, governance and performance. The entity strives for a balance between conciseness and other guiding principles, particularly completeness and comparability (Cheng et al., 2014). To achieve conciseness, an entity has to apply the principle of materiality, follow a logical structure, carry cross references, avoid tautology, minimise generic disclosures and link to more detailed information that does not change regularly like the listing of subsidiaries (IIRC, 2013).

The concept of conciseness is therefore subjective.

In the absence of a rough indicator of what a concise IAR should look like, the concept is vague. It is submitted in this study that conciseness would make more sense if there was a guide, possibly using a number of pages as one feasible measure of conciseness. In this regard, Abeysekera (2013) posits that a concise IAR must not exceed ten pages but conciseness remains a highly theorised, subjective and vague construct. "Reliability and completeness" are the next guiding principles to be analysed after "conciseness".

3.9.6 Reliability and completeness

An IAR must be reliable, meaning that it must be free from material errors and include all material issues, which may be either negative or positive. Reliability, which is also understood as faithful representation, is enhanced by a healthy internal reporting system and an independent external assurance. Balance, as another element of reliability (De Villiers et al., 2017), means that there is no bias in the selection or presentation of information. Information is not weighted, slanted, combined unnecessarily, emphasised, de-emphasised, offset or manipulated. This guarantees the reliability of the results. Balance may be attained by reporting against previously reported targets, giving equal consideration to increases and decreases in capitals, weaknesses and strength of the entity, and negative and positive performance. Balance may also be achieved through a selection of formats that are unlikely to influence assessments performed on the IAR (Adams, 2013b; Barnabe et al., 2013).

Reliability also manifests through the freedom from material errors. This does not mean that information has to be perfect; it implies that there was due care taken in the processes and controls so that there are no material misstatements. Furthermore, freedom from material errors entails that, in cases where estimates are made, they are clearly communicated and the nature and limitations of the estimation process is clearly outlined (IIRC, 2013). At the same time, the IAR must be complete. Completeness is reflected by presentation of both positive and negative information using the industry specific benchmarks. Completeness is also measured by the level of information specificity and preciseness. This could be done by presenting a cost-benefit analysis, evaluating the competitive advantage enjoyed by the entity over its

competitors and future oriented information, which is more uncertain than historical information (Burke & Clarke, 2016). The last guiding principles to be addressed are "consistency and comparability".

3.9.7 Consistency and comparability

Information presented in an IAR must be consistent to enable comparability over time. Consistency entails implementing similar policies over different reporting periods. A change of policy is acceptable if the change improves the quality of information reported. Other than policies, consistency extends to KPIs as well, where the entity has to report on the same KPIs over different reporting periods (Dumay, Bernadi, Guthrie & La Torre, 2017). This enhances comparability between different reporting periods and even between entities.

On the other hand, also comparability refers to the likening of variables in the IAR for one entity over different reporting periods or the likening of IAR variables between entities. Tools can be used to enhance the comparability of IARs, which may include using benchmark data such as industry or regional benchmarks; presenting information in the form of ratios; and reporting quantitative indicators usually used by other entities in a similar industry.

Since the official launch of the <IR> framework in December 2013, <IR> is being adopted at a faster pace by different jurisdictions therefore the reasons why <IR> is being favourably received globally are presented below.

3.10 Arguments for Integrated Reporting

Organisations from different jurisdictions utilise <IR> in order to fulfil the accountability function. <IR> is mandatory in South Africa, but implemented voluntarily in most other jurisdictions. Whether implemented mandatorily or voluntarily, <IR> has brought benefits that include:

❖ better risk identification and mitigation;

❖ transforming decision-making processes in a way that aligns benefits to society, business and the environment (Adams, Potter, Singh, & York, 2016);

❖ the building of connections across business units;

❖ an improved understanding of how entities create value;

❖ increasing management awareness and focus of the entity;

❖ better presentation of business strategy and business models; and

❖ creating value for stakeholders (Adams et al., 2016).

<IR> can also secure capital and credit and build strong business relationships (PWC, 2013). Moreover, IARs give companies a competitive edge and build trust with stakeholders (Brown & Dillard, 2014; PWC, 2013).

<IR> further improves the quality of information, which is presented to users, particularly providers of financial capital. This has a ripple effect of enabling a more efficient and productive allocation of capital. At the same time, <IR> enhances accountability for all capitals, namely, financial, intellectual, human, manufactured, natural, social and relationship, and this phenomenon of capitals is absent in sustainability reporting. Accountability of capitals contributes towards understanding of the interdependencies of these capitals (IIRC, 2013). <IR> brings about a more cohesive and efficient approach to corporate accountability that draws from different reporting systems and ultimately conveys the full range of factors that have a material effect on the ability of an organisation to create value over time (IIRC, 2013:03).

Steyn (2014) identified the anticipated benefits of <IR> as:

❖ Better alignment of reporting with investor needs

❖ Higher levels of trust with stakeholders

❖ Better resource allocation decisions

❖ Cost reductions

❖ Enhanced risk management

❖ Lower reputational risk

❖ Reconsideration of the business model

❖ Greater engagement with investors and other stakeholders

❖ Better identification of opportunities

❖ Development of a common language and collaboration across different functions in the organisation.

At this stage, <IR> is relatively new and is still a developing concept. While some of the purported advantages and benefits are understood from a conceptual level, they are yet to be tested empirically. There is still limited empirical evidence to confirm or refute these benefits for entities. Despite <IR> being received favourably, it has some limitations and they are addressed below.

3.11 Critique of Integrated Reporting

<IR> is credited for bringing about some radical changes to corporate reporting however there are also criticisms that have been levelled against it. Milne and Gray (2013:20) argue that <IR> "is exclusively investor focused and it has virtually nothing – and certainly nothing substantive – to say about either accountability or sustainability". This means that the <IR> framework does not require that entities should report on the full impact of their activities on stakeholders, society and the environment. De Villiers and Sharma (2018:06) also argue that "despite the IIRC's initial rhetoric, <IR> does not accomplish its goal of developing a framework that provides additional information for investors beyond the financial". This can be understood to refer only to providers of financial capital at the expense of other users.

The same sentiments are echoed by Brown and Dillard (2014) who contend that <IR> does not address the decision-making and accountability needs of other stakeholders, such as developing countries, future generations, consumers, employees, suppliers, local communities, labour unions, social movements, governments, indigenous communities and non-governmental organisations (NGOs). Lai, Melloni and Stacchezzini (2018) also maintain that financial stakeholders remain the primary addressees of the IARs despite the IIRC's claims of catering for all stakeholders. This idea is however refuted by advocates of <IR> who believe that, by providing insight into the effectiveness of the organisation's strategy, organisations integrate social and environmental considerations, and social investment activities into the mainstream business processes and decisions. This consideration goes beyond the providers of financial capital to encompass other interested users (Adams et al*., 2016).

The second criticism is that the <IR> framework leaves too much discretion to the firm's management and this ultimately makes comparison difficult, if not impossible (Flower, 2015). In other words, <IR> is principles-based and this leads to low comparability between IARs. The principles-based approach prefers more responsibilities at the top management possibly leading to concealed opportunistic behaviours. Lastly, the assurance levels are very low due to the presence of non-financial information and this compromises the reliability and capability of entities to provide a true and fair view of their value creation narrative (Miller, 2010). De Villiers and Sharma (2018:09) concur when they contend that the IIRC does not require the reporting of any specific key performance indicators and therefore the preparers of IARs need to exercise judgement according to their specific circumstances. The framework leaves too much room to the management to decide what information on performance should be reported. However, this creates distinctions between IARs, which ultimately renders comparability difficult.

In line with this idea of leaving too much room for judgement with the preparers, is the concept of outputs and outcomes embedded in the business model. Outcomes and outputs are very difficult to measure because the current key performance indicators (KPI) proposed by the <IR> framework do not measure outcomes and, as such, <IR> is not able to measure the stocks of the six capitals and their variations (Barnabe et al., 2013). Also, due to the fact <IR> is principles-based, the <IR> framework does not make it compulsory to report on any specific category of capital. Neither does it require entities to report on any specific KPIs. This greatly weakens the incentive by entities to report comprehensively on all the capitals they use or affect. This means that some entities may practice creative accounting to avoid reporting on some of the capitals deliberately (Flower, 2015).

In fact, an argument can be made that the obligations placed before the preparers are broad and conditionally binding. Preparers may disregard these conditional obligations on three grounds, namely, legal prohibition, unavailability of data, and competitive harm. Furthermore, out of the <IR> framework's 168 paragraphs, only 19 of these are written in bold italic that makes the paragraphs binding but only to the extent of conditional binding explained above. The IIRC appears reluctant to place reporting obligations on the management of entities but there is a real danger that unscrupulous

managers will use this discretion availed by the IIRC to avoid reporting on matters they wish to keep secret (Flower, 2015).

The trade-off between increases in one type of capital against decreases in another type of capital is problematic (Flower, 2015). The problem emanates from the difficulty in measuring the different types of capital in consistent and comparable ways. Furthermore, trade-offs on natural capital are most likely not in the interests of society, particularly future generations who have an expectation of receiving the planet in a better state than it was found by the previous generations. The argument being advanced here is that a decline in natural capital may not justifiably be offset against any capital since future generations may not live on today's profits. By permitting trade-offs, the IIRC has created an escape route through which entities can justify damaging the environment. Entities will tend to justify a decrease in natural capital by offsetting it against an increase in another type of capital (Flower, 2015).

While the IIRC emphasises conciseness and coherence of IARs, the definition of what is meant by coherent and concise is missing as there are no metrics to quantify an IAR that can be classified as concise and coherent. Moreover, the <IR> framework does not specify how the connectivity between different reporting strands should be unified (Abeysekera, 2013). There is an expectation that the IIRC should have given some guidance on the qualities and characteristics that define concise, coherent and well-connected IARs.

Flower (2015) and Thomson (2015) agree that the objectives of <IR> are diverse, unintegrated and arguably unintegratable. This may be interpreted to mean that, on one hand, the IIRC wants to fulfil the needs of financial capital providers as informed by the agency theory while, at the same time, attempting to fulfil the needs of other stakeholders as informed by the stakeholder theory. The two opposing theories, as expounded in Chapter 2, are on the extreme ends of the continuum, hence displaying the unintegratable nature of the <IR> objectives.

One of the critiques levelled against <IR> is that some of the key constructs, particularly "value creation" and "integrated thinking", are vaguely defined (Dumay et al., 2017). This means therefore that professional judgement is required where

organisations can interpret these terms in order to suit their needs. In fact, Feng, Cummings and Tweedie (2017:334) argue that, regarding integrated thinking, "the IIRC has not fully defined and articulated the concept of integrated thinking, and there is no shared consensus among practitioners". Integrated thinking therefore remains a newly created concept open to different interpretations or misinterpretations. Furthermore, Dumay et al. (2017:466) argue that the definition of value creation is vague and makes little sense, hence making it difficult to operationalise. They extend their argument that attempting to reconcile what constitutes value through increases, decreases or transformation of capitals caused by a business's activities requires also a full disclosure of the value of destruction caused by companies. Ultimately, trade-offs between capitals are challenging and unclear because of a lack of clarity for value creation (Dumay et al., 2017:466).

Another criticism is that, in the absence of assurance for IARs, their credibility will suffer. This is mainly due to the absence of assurance standards. An example of where credibility of an IAR was questioned is Sasol's IAR, which was ranked fifth in *EY's Excellence in Integrated Reporting Awards 2013* (EY, 2013). Despite Sasol being in the extractive industry, there is no mention of the carbon bubble in the 2013 IAR (carbon bubble refers to the potential devaluation of companies due to their inability to extract carbon in the future). The non-mention of the carbon bubble raises serious questions about the credibility of Sasol's highly regarded IAR (Adams, 2015).

From the researcher's perspective, a further criticism is that <IR> is primarily for the private sector and, in particular, for profit-making entities. The researcher questions the idea of adapting the <IR> framework to suit the public sector and not-for-profit organisations. It is common knowledge that profit-making organisations are pursuing profits while not-for-profit organisations exist to offer social services. It is difficult to reconcile that entities whose objectives are fundamentally different be guided by a similar set of guiding principles. Even if there is the notion of adaptation, still another question comes up: to what extent should adaptation go? Furthermore, a question may arise as to whether different entities may adapt in a similar manner. If not, then the issue of comparability, raised above, is questioned. In the same way, there are financial reporting standards for small to medium enterprises (SMEs). The researcher posits that the IIRC could develop a completely new framework to cater for not-for-

profit organisations.

Another criticism asserted by opponents of <IR> is that the IIRC initially proposed that the IAR would be an organisation's primary report, thereby replacing rather than adding to existing requirements (Flower, 2015). This proposal was however dropped and unfortunately, the IIRC does not admit to this fact. Resultantly, there is no requirement to present a single IAR. In fact, the IAR becomes another report adding to the clutter of reports (De Villiers & Sharma, 2018:09).

In addition to the criticisms above, is that the IIRC's attempts to establish preparers' trust via the use of reputational claims were largely unsuccessful (Chaidali & Jones, 2017:16). Reputational claims by the IIRC have fallen by the wayside because the IIRC was unable to engage preparers of IARs in the <IR> initiative programme. Also, there is a perception by preparers that refutes the composition of the IIRC (Chaidali & Jones, 2017:16). Flower (2015) argues that the IIRC was exposed to regulatory capture where the accounting profession and multinational enterprises, who make up the greater membership of the IIRC, are determined to control a new initiative that threatens their established position (Flower, 2015). This is one of the reasons why it is difficult to have <IR> accepted as a corporate reporting norm.

The IIRC's approach to reporting is founded on the assumption that the well-being of a company and that of society are the same. Yet Flower (2015) argues that the business case of an organisation is based on the capitalist theory of a firm, which is anchored on the following principal elements:

❖ The company/entity is owned by capitalists who supply its financial capital.

❖ The entity buys factors of production at market prices and transforms them into finished goods and services.

❖ If revenue received from the sale of finished goods is greater than the cost, the entity records a profit.

❖ The most important factor of production is capital.

❖ Investors need information on company profits in order to allocate capital efficiently, and therefore providers of capital are deemed the primary users of IARs (Flower, 2015:13)

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Despite being founded on the capitalist theory, the <IR> framework acknowledges the existence of stakeholders other than investors and seeks the impression that it takes into account their needs. However, what the IIRC does in determining the content of an IAR is to give priority to the needs of the providers of financial capital while availing mere lip service to the needs of other stakeholders (De Villiers & Sharma, 2018:10).

<IR> has still a long way to go before it becomes the corporate reporting norm (Dumay et al., 2016; Adams, 2015). These authors argue that <IR> has not achieved the groundswell support required to achieve this objective. Some preparers dismiss the claim advanced by the IIRC that it is a professional accounting association on the basis that it is merely an attempt of a coalition of professionals to further their interests. They distrust the IIRC and this dents its reputation, which they deem is associated with the satisfaction of personal incentives, not necessarily to improve the face of reporting, as they claim (Chaidali & Jones, 2017:17). De Villiers and Sharma (2018:09) support this argument when they posit that the presence of accountants in the IIRC is mainly for self-interest rather than a genuine attempt to reform financial reporting shortcomings.

Dumay et al. (2016) raised the very same argument when they observed that accountants' presence in the IIRC was more about preserving the status quo, which happens to be a comfort zone, rather than venturing into de facto attempts to improve corporate reporting. Distrust has negative consequences, especially on the buy-in of <IR> by company executives and boards of directors. Despite the arguments raised against <IR>, however, it is argued that <IR> remains a relevant and globally accepted reporting system used to fulfil the accountability function. The next section attempts to compare and contrast financial reporting, sustainability reporting and <IR>.

3.12 Financial reporting, sustainability reporting and integrated reporting compared

After analysing the different reporting systems in detail, it is appropriate to juxtapose the three reporting systems considered the most popular.

Table 3.2: Financial reporting, sustainability reporting and integrated reporting: Main features

	Financial Reporting	**Sustainability Reporting**	**Integrated Reporting**
Target	Specific stakeholders	Several stakeholders	Primarily providers

	(shareholders, investors, lenders and creditors)	(social and environmental perspective)	of capital but of benefit to other stakeholders
Mandatory/ voluntary	Mandatory	Voluntary (with some exceptions: Denmark, Sweden, France)	Voluntary (with some exceptions: South Africa)
Regulation/ guidelines	National and international laws (GAAP or IAS/IFRS)	Global Reporting Initiative	International Integrated Reporting Council framework
Comparability	High	Medium	Low
Industry customisation	Low	Medium (sector supplements)	High
Assurance level	High	Low	Low
Scope	Financial reporting entity (company or group of companies)	Broader than financial reporting entity (supply chain, LCA approach)	Broader than financial reporting entity (supply chain, LCA approach)

Source: Barnabe et al. (2013:50)

It can be noted from Table 3.2 that sustainability reporting and <IR> have more similarities when compared with financial reporting. Financial reporting and <IR> address the same primary users who are shareholders, known as financial capital providers under <IR>. Lastly, the scope for sustainability reporting and <IR> seems to be broader than that of financial reporting. After the comparative analysis of the three reporting systems, the chapter ends by drawing up a summary and conclusions for the whole chapter.

3.13 Summary and conclusions

The chapter started by defining accountability and the different kinds of accountability, which exist in the literature. Accountability exists in the form of political accountability, managerial, financial or corporate accountability, public accountability, professional accountability and personal accountability. It was noted that accountability existed from as early as 5000 BC. However, due to the continuously changing needs of stakeholders, accountability changed from one form to another. Financial reporting, though mainly limited to use by rulers at the time, started from 5000 BC. It was traced through its chronological development, which consisted of three stages of financial reporting, namely, the ancient times, middle ages and modern times. During the ancient times, pictures, graphic symbols on vases, shards and stones were first used. Eventually record keeping evolved to the use of letters and finally to writing. These

different stages show how accountability has evolved over time adjusting to the ever-changing needs of different stakeholders.

The middle ages are characterised by two major developments, namely, the development of the *Capitulare de Villis* and the publication of the *Summa de Arithmetica, Geometria Proportioni et Proportionalita.* The *Capitulare de Villis* was developed to lay out rules and regulations on how to administer animals, land, revenue collection and general administration of the Empire. This document was the origin of IFRS that started in 2005 with the release of the International Accounting Standards. *Summa de Arithmetica, Geometria Proportioni et Proportionalita* is credited for being the book that first documented double entry, which then was referred to as the Method of Venice. Double entry is the cornerstone on which financial reports are prepared. The modern times began in the 1700s in Europe and America with the beginning of the Industrial Revolution. Now, financial reporting is mainly guided and informed by the IFRS.

Despite having started in ancient times, financial reporting has some criticisms that include being premised on assumptions, which hinder the reporting of social and environmental transactions. Furthermore, the elements of financial reporting are defined in such a way that they exclude any impact on resources that are shared and not entirely controlled by the entity. Another criticism is that the financial reports have become very long and complex that hinders understanding. Despite these limitations, financial reporting remains one of the trusted reporting systems especially when accountability is targeting shareholders. It was argued that it is from these limitations that the other reporting systems were developed in an attempt to mitigate these financial reporting limitations.

The first reporting system to be analysed is the balanced scorecard, which is understood as an internal performance measurement framework that presents financial and non-financial information. The balanced scorecard was expounded and its limitations presented. The triple bottom line, which is understood as the external reporting system that acknowledges the interaction of three key areas, economic success, environmental quality and social equity, was analysed. Limitations of the system were also presented. Sustainability reporting, which was crafted by the GRI in

2000 became popular by focusing mainly on the presentation of how companies present their plans for surviving into the future. Limitations of SR were also presented in this chapter. These reporting systems were among the first systems to include non-financial information in the CARs and this ultimately improved the quality of accountability.

The last aspect to be addressed in this chapter is <IR>, which is understood to be a framework founded on integrated thinking that results in the preparation of IARs. Guiding principles, mandated by the IIRC, JSE (Johannesburg Stock Exchange), the Companies Act 71 of 2008 and South African Institute of Chartered Accountants (SAICA), and the International Accounting Standards Board (IASB), have to be adhered to in preparing IARs.

The content elements are organisational overview and the external environment; governance; business model; risk and opportunities; strategy and resource allocation; performance; outlook; basis of preparation; and general reporting guidance. The chapter further analysed the fundamental concepts, which are value creation for the organisation and others; the capitals; and the value creation process. The chapter covered the guiding principles, which have to be adhered to when preparing IARs. The guiding principles are listed as strategic focus and future orientation; connectivity of information; stakeholder relationships; materiality; conciseness; reliability and completeness; and consistency and comparability. The quality of accountability has improved through <IR>, which is an improvement of financial reporting, the BSC, the TBL and the SR.

Accountability has gone through different stages in order to fulfil the needs of stakeholders. While financial reporting is still being used today, it has several limitations mainly its failure to account for social and environmental transactions. It is from these limitations that other reporting frameworks such as the balanced scorecard, triple bottom line, sustainability reporting and <IR> were developed. While these reporting systems rectify the shortcomings of financial reporting, no single reporting system has managed to dislodge financial reporting as the main form of corporate reporting. The other finding is that, while <IR> is being accepted globally as a form of alternative reporting to financial reporting, it has some limitations, which impede its

effectiveness and usefulness. However, despite these limitations, <IR> remains one of the best reporting systems to fulfil the corporate accountability function. The next chapter will analyse the extant literature on <IR> to evaluate the developments that have taken place regarding <IR> and how <IR>, as a reporting system, can be improved in order to improve the quality and extent of the accountability function.

CHAPTER 4

LITERATURE REVIEW: INTEGRATED REPORTING

4.1 Introduction

The previous chapter addressed <IR> but focused on unpacking the concept by analysing and explaining the content elements that should be included in the IAR. It also addressed the fundamental concepts, which underpin <IR> and the guiding principles that inform the preparation and presentation of IAR. This chapter goes beyond the content related aspects of <IR> by interrogating the extant <IR> literature. These two chapters complement each other and it is hoped that, by improving <IR> as a reporting system, the quality of corporate accountability will improve.

This chapter covers the literature related to <IR>. This means that studies, which are linked directly or indirectly to the current study, are taken through a four-stage process where they are summarised, synthesised, analysed and used to authorise or legitimise the current study (Trafford & Leshem, 2012). Summarising literature includes the listing of relevant sources while synthesising sources entails identifying different schools of thought by establishing relationships between sources and grouping similar themed sources together. Analysis of sources entails the critical evaluation of sources paying particular attention to consistency or flaws in arguments, examining the relevance of adopted theoretical perspectives and noting any limitations in the explanatory power of these sources. Lastly, there is an authorisation of the current study using extant literature. This is done by emphasising the relationship between extant literature and the current research. This confirms whether the relationship supports, confirms, develops, or extends the current literature and whether the current study is similar to or departs from the extant literature.

After summarising the relevant literature, the different studies were synthesised into seven categories:

1. Conceptual studies that attempt to unpack the concept of <IR>.

2. Empirical studies that investigate various <IR> constructs.

3. Studies, which address <IR> in the not-for-profit entities.

4. Economics-based archival studies.

5. Case studies that focus on why entities may adopt <IR>.

6. Studies, which focus on <IR> assurance.

7. Studies that measure the level of <IR> quality.

The seven categories of literature were taken through the four stages highlighted above.

4.2 Conceptual studies

This category is made up of those studies that did not perform data collection but rather carried out a conceptual and academic analysis focusing on different aspects of <IR>. De Villiers and Sharma (2018) examined how intellectual capital (IC) is reported under each of the frameworks, namely, the Global Reporting Initiative (GRI) framework for corporate social responsibility disclosures, the <IR> framework and financial reporting framework. They further examined the future of IC reporting by presenting a critical reflection of different forms of reporting (mentioned above) with a particular focus on <IR>. They concluded that <IR> is unlikely to subsume traditional financial reporting nor will it be able to provide information currently being reported in GRI-type reports.

This finding confirms what Flower (2015) and Thomson (2015) found in their studies. Flower (2015) traces the history of the IIRC since its formation in 2010. The concept of <IR> is discussed in detail and Flower (2015) concludes that, in the <IR> framework, the IIRC has abandoned sustainability accounting. He bases this conclusion on two considerations: that the IIRC's concept of value is "value for investors" and not "value for society" and that the IIRC places no obligation on firms to report harm inflicted on entities outside the firm (such as the environment) where there is no subsequent impact on the firm. The paper also concludes that the IIRC's proposals will have little impact on corporate reporting practices because of their lack of force. Flower (2015) attributes the IIRC's abandonment of sustainability accounting to the composition of the IIRC's governing council that is dominated by the accountancy profession and multinational enterprises, which are determined to control any initiative that threatens

their established position. In effect, the IIRC has been the victim of "regulatory capture".

Thomson (2015), whose main purpose is to analyse the paper by Flower (2015), agrees with the findings of Flower (2015) as do Brown and Dillard (2014) who argue that <IR>, as conceived by the IIRC, provides a very limited and one-sided approach to assessing and reporting on sustainability issues. Business case framing remains an ideologically closed approach. While these three studies mentioned above (De Villiers & Sharma, 2018; Flower, 2015; Thomson, 2015) present a pessimistic future of <IR>, Adams (2015) presents an optimistic future of <IR> by calling for academics to engage with the process and to contribute to the development of new forms of accounting to ensure this potential is reached.

In another study, De Villiers et al. (2017) discuss the background to <IR> and provide an overview of the <IR> literature. They also discuss measurement and research design issues to take into account when designing studies on <IR>, identify approaches, and set an agenda for future research. Dumay et al. (2017) did a similar study where they synthesised insights from contemporary accounting research, <IR> as a general concept and<IR> as espoused by the IIRC in the <IR> framework. They further explore possible barriers that may hinder the adoption and implementation of <IR>. Dumay et al. (2016) reviewed the field of <IR> in order to develop insights into how <IR> research is developing; to offer a critique of the research to date; and to outline future research opportunities. These two studies built on the work of Simnett and Higgins (2015) who provide insights into salient issues in the development of the <IR> framework, and emerging issues in the implementation of this framework, with the aim of identifying opportunities for future research.

A study by De Villiers et al. (2014) covered similar objectives when they synthesised insights from accounting and accountability research into the rapidly emerging field of <IR> and proposed a comprehensive agenda for future research in this area. Cheng et al. (2014) also introduced the concept of <IR> as described by the IIRC. Their paper discusses key issues that were being debated relating to the consultation draft that the IIRC had to resolve prior to the expected release of the <IR> framework in December 2013. Lastly, they present a range of potential research issues relating to the

development and implementation of <IR>. Eccles and Serafeim (2011; 2014), in earlier studies, describe the concept of <IR> and give reasons why <IR> could be a superior mechanism to inform and transform corporate reporting. They also discuss the qualities of an effective IAR. Another earlier work is by Barnabe et al. (2013) who describe <IR>, present the advantages and disadvantages of <IR> and discuss case studies of IARs presented by companies.

Focusing on a particular element of <IR>, Del Baldo (2017:505) discusses the most critical aspects relative to the "usability" of the <IR> framework faced by small and medium-sized enterprises (SMEs) in releasing the IAR and adapting the <IR> principles to their needs and features. A conclusion was drawn that the main criticalities faced by SMEs in the <IR> process are: clearly defining the relationship between sustainability and <IR>; adapting the main <IR> concepts; understanding the benefits from implementing <IR> and showing the usefulness of a simplified and operative guidance for releasing the IAR within SMEs (Del Baldo, 2017:505).

In another study, which focuses on one construct of <IR>, Lai et al. (2017:533) explain how the principle of materiality is implemented in different <IR> contexts. They infer that, in <IR> preparers' view, the meaning of materiality corresponds with the company strategy as <IR> describes strategic priorities and related actions and results. Capital providers are the primary intended addressees of the material information. Although several actors engage in <IR> preparation, a specific "IR hub", in strict collaboration with and dependence on the chief financial officer, governs the materiality determination process.

In another study that focuses on one construct of <IR>, De Villiers, Hsiao and Maroun (2017:450) develop a conceptual model for examining the development of <IR> literature. They relate different studies to the conceptual model and identify areas for future research. They conclude that, with support from prior literature, their model can be used in multiple ways as an organising framework.

Coulson et al. (2015:290), in another study examining one component of <IR>, explore the potential of the metaphor of capital. They evaluate the development of the multiple capitals concept in the <IR> framework and consider how it might be developed and

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used when preparing IARs. Coulson et al. (2015) find that the agenda of the IIRC is a shift from a "financial capital market system" to an "inclusive capital market system" through the recognition of multiple capitals and <IR> thinking. It is emphasised that the vision of the IIRC is not intended as a call for the measurement of these various capitals in monetary terms alone. They review the potential commensurability of capitals and point out potential tensions between them (Coulson et al., 2015). Some of the challenges and opportunities encountered when reporting on multiple capitals are identified as the use of the capitals terminology; analysing connectivity between the capitals; and the extent to which value created (and depleted) by each capital should be quantified and monetised.

In two other studies, the authors develop templates, which may be used to unpack and understand <IR>. Sinnewe (2017:356) discusses the application of the Faff (2015) pitch template in an <IR> setting. She recounts her personal experience with completing the template for a pitch that examines reporting conciseness in the context of <IR>. Sinnewe (2017) finds that the template is useful particularly in refining a research idea in a structured manner. In another study, Abeysekera (2013:227) outlines the concept of <IR> and proposes a template for <IR> in organisations. The template is founded on the concepts proposed for <IR> by the King Report on Governance for South Africa (King IV) and the IIRC. Sinnewe (2017) concludes that the IAR should explain the narrative of reaching the organisation's vision, underpinned by its values, enacted by management, monitored by governance, and using facets of resources relating to financial capital, intellectual capital, social capital, and environmental capital.

The last study to be analysed in this section is one by Owen (2013:340) who reports on ACCA's support of and response to the latest initiatives in <IR>. In particular, the focus is on the impact this will have on the education and training of accountants in order to reflect these new principles to prepare the 21[st] century accountant for a challenging role in the future. Owen (2013) concludes that the concept of <IR> is not entirely new. As addressed in The Corporate Report, published over 35 years ago, <IR> has evolved from CSR and is therefore a natural extension of many principles of environmental or "green" accounting, sustainability reporting and TBL accounting. This argument was raised earlier in section 3.7.

Owen (2013:340) points out that accounting curricula require a strategic rather than operational or transactional focus. Modern accounting syllabi also need to contain more content on business risk, integrated into a range of syllabi, rather than located in a single discrete syllabus. Such developments may lead to an increase in accountability and transparency in corporate reporting. These developments can only be in the wider public interest of improving the relevance of information for decision-making for all stakeholders, thereby allowing greater efficiency in the allocation of financial and other resources, and in adding public value (Owen, 2013:340).

This study therefore extends these conceptual studies presented above. This study first develops a framework, which can be used to measure the quality of IARs. It then measures the quality of 400 IARs over a four-year period, i.e. 2013 to 2016. The measurement is done utilising a PAI. The study departs from the conceptual approach adopted in this group of conceptual studies (presented above), to an empirical approach where actual archival data and semi-structured interview data are collected, analysed and interpreted. Table 4.1 summarises the conceptual studies presented under the first category of studies analysed in this chapter. For all the studies interrogated under this category, Table 4.1, summarises the author(s) name, journal of publication, research purpose, the research method(s) used and the conclusions arrived at.

Table 4.1: Summary Table of major conceptual studies on <IR>

Authors	Journal	Research Purpose	Research Method	Conclusions
Abeysekera, 2013	Journal of Intellectual Capital	To outline the concept of <IR> and to propose a template for <IR> in organisations.	The approach to the conceptual model is founded on concepts proposed on <IR> by the King Report on Governance for South Africa (King IV), and the IIRC in the UK	The IAR should explain the story of reaching the organisation's vision, underpinned by its values, enacted by management, monitored by governance, and using facets of resources relating to financial capital, intellectual capital, social capital, and environmental capital.
ACCA, 2011	ACCA publication	What is <IR>?	Literature study	Defining <IR>, benefits of <IR>, role of accountants in implementing <IR> challenges of <IR> and potential solutions.
Adams, 2015	Critical Perspectives on Accounting	The paper sets out the case for <IR> and its potential to change the thinking of corporate actors leading to the further integration of sustainability actions and impacts on corporate strategic planning and decision making	Conceptual analysis	The paper calls for academics to engage with the process and to contribute to the development of new forms of accounting to help ensure this potential is reached. It suggests areas of further research to facilitate this. The paper was written in response to John Flower's paper titled *The International Integrated Reporting Council: A story of failure.*
Del Baldo, 2017	Meditari Accountancy Research	To discuss the most critical aspects relative to the "usability" of the <IR> framework faced by small and medium-sized enterprises (SMEs) in releasing the IAR and adapting the <IR> principles to their needs and features.	Deductive approach – Literature and technical review aimed at tracing the background and the framework on <IR> in SMEs. inductive approach – action research approach	Main criticalities faced by an SME in the IR process, namely, clearly defining the relationship between sustainability and <IR>; adapting the main IR concepts and understanding the benefits of implementing <IR>. Showing the usefulness of a simplified and operative guidance for releasing the IAR within SMEs. Effectiveness of direct involvement by NIBR working group and the provision of practical examples and suggestions

Table 4.1 continued

Authors	Journal	Research Purpose	Research Method	conclusions
Brown and Dillard, 2014	Accounting, Auditing & Accountability	To critically assess <IR> to "broaden out" and "open up" dialogue and debate about how accounting and reporting standards might assist or obstruct efforts to foster sustainable business practices	Literature study (literature from science and technology)	<IR>, as conceived by the IIRC, provides a very limited and one-sided approach to assessing and reporting on sustainability issues. Business case framing remains an ideologically closed approach
Busco, Frigo, Riccaboni and Quattrone, 2013	Strategic Finance	<IR> concepts	Conceptual and academic analysis	Defining <IR>, Benefits of <IR>, <IR> challenges and potential solutions.
Cheng, Green, Conradie and Romi, 2014	Journal of International Financial Management & Accounting	To introduce the concept of <IR> as described by the IIRC. The paper discusses key issues that were being debated relating to the consultation draft that the IIRC had to resolve prior to the expected release of their <IR> framework in late 2013. To present a range of potential research issues relating to the development and implementation of <IR>.	Conceptual and academic analysis	Defining and tracing <IR>. Key issues that were being debated and potential future research areas were identified. The key issues include content elements of <IR>, guiding principles of <IR> and fundamental concepts underpinning <IR>.

Table 4.1 continued

Authors	Journal	Research Purpose	Research Method	conclusions
Coulson, Adams, Nugent and Haynes, 2015	Sustainability Accounting, Management and Policy Journal	To explore the potential of the metaphor of capital, and to chart the development of the multiple capitals concept in the <IR> framework and consider how it might develop and be used.	Content analysis, literature review and academic analysis	The authors find that the agenda of the IIRC is a shift from a "financial capital market system" to an "inclusive capital market system" through recognition of multiple capitals and <IR> thinking. Through insights from research on planetary boundaries and gendered capitals, the authors critique the potential commensurability of capitals and make visible potential tensions between them. Some of the challenges and opportunities when reporting on multiple capitals are recognised. These include: use of the capitals' terminology; analysing connectivity between the capitals; the extent to which value created (and depleted) by each capital should be monetised and highlight possibilities for future research.
De Villiers and Sharma, 2018 (Article in press)	Critical Perspectives on Accounting	To examine the future of IC reporting by offering critical reflection on different forms of reporting, with a particular focus on <IR>.	Conceptual and academic analysis (examining reporting of IC under different frameworks)	<IR> is unlikely to subsume traditional financial statement reporting, nor will it be able to provide all the information currently reported in GRI-type reports
De Villiers, Hsiao and Maroun, 2017	Meditari Accountancy Research	To develop a conceptual model for examining the development of <IR> and identify areas for future research	Narrative/discursive style to summarise key findings from the articles in the special issue and develop a normative research agenda	Findings of the prior literature support the conceptual model developed in this paper.

Table 4.1 continued

Authors	Journal	Research Purpose	Research Method	conclusions
De Villiers, Venter and Hsiao, 2017	Accounting & Finance	To discuss the background to <IR>, provide an overview of the <IR> literature, discuss measurement and research design issues to take into account when designing studies on <IR>, identify approaches and set an agenda for future research.	Literature study	The paper provides the <IR> background, discusses the prior literature and highlights research opportunities in <IR>. Identifies and discusses broad research approaches and questions, measurement issues, control variables to consider and other research design considerations.
De Villiers, Rinaldi and Unerman, 2014	Accounting, Auditing & Accountability Journal	To synthesise insights from accounting and accountability research into the rapidly emerging field of<IR>and propose a comprehensive agenda for future research in this area.	Conceptual and academic analysis	The rapid development of <IR> policy and early developments of its practice present theoretical and empirical challenges because of the different ways in which <IR> is understood and enacted within institutions. It highlights many areas where further robust academic research is needed to guide developments in policy and practice.
Dumay, Bernadi, Guthrie and La Torre, 2017	Meditari Accountancy Research	To synthesise insights from contemporary accounting research <IR> as a general concept and<IR> as espoused by the IIRC in the <IR> framework. To explore possible barriers that may hinder adoption and implementation of <IR>.	Literature study and academic analysis	The flexibility and lack of prescription concerning actual disclosures and metrics in the <IR> framework could allow it to be used for compliance, regardless of the other benefits lauded by the IIRC. External and internal forces driving <IR> adoption, with one prominent example being the European Union Directive on non-financial reporting. Because of the different ways in which <IR> is understood and enacted, there are numerous theoretical and empirical challenges for academics. Potential areas for further robust academic research and the need to contribute to <IR> policy and practice.

Table 4.1 continued

Authors	Journal	Research Purpose	Research Method	conclusions
Dumay, Bernardi, Guthrie and Demartini, 2016	Accounting Forum	To review the field of <IR>, to develop insights into how <IR> research is developing, offer a critique of the research to date, and outline future research opportunities.	Literature study and academic analysis	Published <IR> research presents normative arguments for <IR> and there is little research examining <IR> practice. Thus, authors call for more research that reviews <IR>'s rhetoric and practice. To frame future research, authors refer to parallels from intellectual capital research that identify four distinct research stages to outline how<IR> research might emerge. Thus, this paper offers an insightful critique into an emerging accounting practice.
Eccles and Serafeim, 2011	INNOVATIO Publishing Ltd	To describe the concept of <IR>, provide a brief history of its development, review the current state of practice, present a strategy for institutional change that will accelerate the adoption of <IR> in order to meet the five-year objective, and conclude with a call to the reader to speed the adoption of <IR>	Literature study and academic analysis	Defining <IR>, benefits of <IR>, challenges of <IR> and potential solutions
Eccles and Serafeim, 2014	Greenleaf Publishers	To describe the concept of <IR> and why <IR> could be a superior mechanism to inform and transform corporate reporting. Discuss qualities of an effective IAR.	Literature study and academic analysis	Defining <IR>, benefits of <IR>, challenges of <IR> and potential solutions

Table 4.1 continued

Authors	Journal	Research Purpose	Research Method	conclusions
Flower, 2015	Critical Perspectives on Accounting	The paper traces the history of the IIRC over the four years since its formation in 2010	Conceptual analysis and academic analysis	In the <IR> framework, the IIRC has abandoned sustainability accounting. It bases this conclusion on two considerations: that the IIRC's concept of value is "value for investors" and not "value for society"; and that the IIRC places no obligation on firms to report harm inflicted on entities outside the firm (such as the environment) where there is no subsequent impact on the firm. The paper also concludes that the IIRC's proposals will have little impact on corporate reporting practice, because of their lack of force.
Lai, Melloni and Stacchezzini, 2017	Meditari Accountancy Research	To understand how the principle of materiality is implemented in <IR> contexts.	Literature study and academic analysis	In <IR> preparers' view, the meaning of materiality corresponds with the company strategy: <IR> describes strategic priorities and related actions and results. Capital providers are the primary intended addressees of the material information. Although several actors engage in <IR> preparation, the materiality determination process is governed by a specific "IR hub", which works in collaboration with the chief financial officer.
Owen, 2013	Accounting Education: An International Journal	To report on ACCA's support of and response to the latest initiatives in <IR>, in particular, the impact this will have on the education and training of accountants in order to reflect these new principles to prepare the 21st century accountant for a much more challenging role in the near future.	Conceptual analysis and academic analysis	<IR> has evolved from CSR. It is a natural extension of many principles of environmental or "green" accounting, sustainability reporting and TBL accounting. Accounting curricula will need even more of a strategic rather than operational or transactional focus. Modern accounting syllabi will need to contain more content on business risk, rather than located in a single discrete syllabus, efficiency in the allocation of financial and other resources, and in adding public value.

Table 4.1 continued

Authors	Journal	Research Purpose	Research Method	conclusions
Simnett and Huggins, 2015	Sustainability Accounting, Management and Policy Journal	To provide insights into salient issues in the development of the <IR> framework, and emerging issues in the implementation of this framework, with the aim of identifying opportunities for future research	Archival analysis of the responses to the IIRC's public consultation phases, providing insights into arguments for and against salient aspects of the framework, and identifying issues that would benefit from future research.	The paper identifies a range of future research opportunities and outlines the research approaches by which academics can assess the costs and benefits of company reporting in accordance with the <IR> framework and assuring this information.
Sinnewe, 2017	Accounting Research Journal	To provide a discussion of the application of the Faff (2015) pitch template to a financial accounting research topic.	The author recounts her personal experience with completing the template for a pitch that examines reporting conciseness in the context of <IR>	The template was found useful in refining a research idea in a structured manner.
Thomson, 2015	Critical Perspectives on Accounting	To analyse the paper by Flower (2015) that critiques the sustainability of the IIRC proposed framework for <IR>.	Conceptual analysis and academic analysis	The paper supports the criticisms and conclusions raised by Flower (2015) and provides some additional insights into the possible impact of <IR>. In the <IR> framework, the IIRC abandoned sustainability accounting because the IIRC's concept of value is "value for investors" and not "value for society". In addition, the IIRC places no obligation on firms to report harm inflicted on entities outside the firm. The paper also concludes that the IIRC's proposals will have little impact on corporate reporting practice, because of their lack of force.

Having spent some time on the conceptual studies, attention is now turned to empirical studies that address various <IR> constructs as presented below.

4.3 Empirical studies that investigate various <IR> constructs

This is the second category of <IR> literature to be discussed in this study. This category is composed of different studies, which empirically investigated different constructs of <IR>. These studies did not deal with <IR> in totality, but rather dealt with a section of <IR>. The first study under this category is that by Al-Htaybat and Von Alberti-Alhtaybat (2018) who investigated the link between <IR> and integrated thinking. Guided by Bourdieu's theory of practice, the authors use video, documents and interview material to investigate the perception and status quo of integrated thinking and <IR> at a case organisation. Al-Htaybat and Von Alberti-Alhtaybat (2018) demonstrate that integrated thinking and <IR> initiative and development in the case organisation are governed by the organisational habitus[1] of handling uncertainty and disruption. They also show that <IR> consists of active integrated thinking.

Adams (2017) addresses the same issue of integrated thinking by examining and explaining the complex interrelationships, which influence the ability of companies to create value for the providers of financial capital and other stakeholders. In the process, the author examines the interrelationships between environmental, social and governance risk; delivering on corporate strategy; non-financial corporate reporting, and board oversight. The author interviews board chairs and non-executive directors of large listed companies on the JSE and the Australian Stock Exchange (Adams, 2017). The study finds that reporting processes, particularly those set out in the King IV code and the <IR> framework, influence cognitive frames by enhancing board oversight and assist organisations in managing complexity. The ultimate effect is an increased awareness of the impact of environmental, social and governance risk issues together with a broader view of value creation despite investor interest (Adams, 2017:906).

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[1] Habitus refers to the experiences, actions, reactions and rules that are internalised and that govern actions but also influence external structures (Bourdieu, 1980).

Despite different objectives, Dumay and Dai (2017) also investigate the concept of integrated thinking. In particular, they explore integrated thinking as a cultural control mechanism and analyse how it operates. They make use of the case study approach utilising semi-structured interviews. Dumay and Dai (2017) find that the responsible banking culture that was in place for the small Australian bank prior to joining the IIRC's pilot programme is a stronger cultural control alongside personnel, results and action controls. Furthermore, the authors find that integrated thinking clashes with the existing organisational culture rather than driving a new organisational culture.

Feng et al. (2017) reflect on integrated thinking in a different way. They explore how key stakeholders interpret integrated thinking and how IIRC's pilot organisations are applying integrated thinking in practice. Semi-structured interviews were conducted with stakeholders in Australia that include two <IR> pilot organisations, one professional association, an accounting professional body, an accounting firm and two IIRC officials. The study shows that the IIRC has not fully defined and articulated the concept of integrated thinking (Feng et al., 2017). Furthermore, the findings reveal that, while there is evidence of an evolving understanding of integrated thinking within practice, there is no shared consensus among practitioners as to their understanding of it. Lastly, Feng et al. (2017) conclude that what remains unclear is how this understanding will develop over time.

Guthrie, Manes-Rossi and Orelli (2017), writing on the same phenomenon of integrated thinking, explore the linkages between <IR> and the organisations' internal processes. They specifically investigate the mechanisms of change that can lead organisations to adopting <IR> disclosure and how this influences integrated thinking internally. Guthrie et al. (2017) perform a literature review and academic analysis on several directives, policy and framework pronouncements, official documents, press releases and in-depth, semi-structured interviews. The case study approach, focusing on five Italian public sector organisations, was utilised in the study. Findings show that the process of change in organisations adopting <IR> is their adoption of a way of thinking because of the process of internalisation (Guthrie et al., 2017).

McNally, Cerbone and Maroun (2017) reflect on the same construct of integrated thinking. They explore challenges to preparing IARs. The exploration is done using an

integrated thinking framework, which stresses the importance of an interconnection between sustainability performance, proactive sustainability management and <IR>. Detailed interviews were conducted with 26 preparers at nine South African based organisations. The study shows that <IR> is not consistently seen as a natural part of the business processes despite the relevance of different types of capitals under different business models. McNally et al. (2017) also note that the new report format, which is imposed on existing internal processes, tends to limit the development of management control systems and a supporting infrastructure. Other findings further reveal that reporting guidelines are used as checklists, stakeholder engagement is limited, systems are always compatible and data analysis is difficult. Lastly, McNally et al. (2017) report that preparers are unconvinced that investors take IARs seriously. This in turn, limits the interconnection between sustainability performance and <IR>.

In another different study, which analyses the process through which an IIRC pilot company adopts <IR>, Gibassier, Rodrigue and Arjaliès (2018) perform a seven-year longitudinal ethnographic study based on semi-structured interviews, observations, and documentary evidence. The study finds that the company envisioned <IR> as "rational myth" and that <IR> conceptualisation acted as a springboard for <IR> adoption. Furthermore, the study finds that the company challenged the vision of <IR> as suggested by the IIRC, in order to stay true to its conceptualisation of <IR>. The company ultimately chose to implement its own version of an IAR (Gibassier et al., 2018).

The next study in this category is the one by La Torre, Valentinetti, Dumay and Rea (2018). They examine the potential for eXtensible Business Reporting Language (XBRL) to go beyond static reporting. In the process, they develop a taxonomy structure of information for providing a knowledge base and insights for an XBRL taxonomy for <IR>. As a pragmatic exploratory research approach, the authors conduct Design Science (DS) research, which is embraced to create a new "artefact". Moreover, thematic content analysis is used to analyse <IR> in practice. La Torre et al. (2018) find that, using XBRL for <IR>, allows a shift from static and periodic reporting to more relevant and dynamic corporate disclosure for stakeholders. Furthermore, the bi-dimensional taxonomy structure allows users to navigate disclosure from two different perspectives (content elements and capitals), display

specific themes of interest, and pursue detailed information.

Another study of Lai et al. (2018) analyses how the preparers' mode of cognition influences the patterns of accountability associated with <IR>. They adopt a functionalist approach to narratives. They also conducted interviews with the <IR> preparers of a global insurer that has used <IR> since 2013. Lai et al. (2018) find that the preparers' narrative mode of cognition facilitates dialogue with <IR> users. This narrative mode of cognition addresses accountability tensions by revealing the company's value creation process. Preparers' efforts to establish a meaningful dialogue with a growing variety of stakeholders through broader and plainer messages reveal the potential of <IR> as a narrative source of a socialising form of accountability. However, financial stakeholders remain the primary addressees of the reports.

In yet another study, McNally and Maroun (2018) challenge the notion that non-financial reporting is mainly about impression management or is only a superficial response to the hegemonic challenges posed by the sustainability movement. They employ the case study method where data is collected using detailed interviews with all staff members involved in the preparation process. Interviews are complemented by a review of the minutes of the company's sustainability reports. McNally and Maroun (2018) find that a decision by the case organisation to prepare an IAR gives rise to different forms of resistance, which limit the change potential of the <IR> initiative. Moreover, they find that accounting for financial and non-financial information expands the scope of the conventional accounting system, which facilitates broader management control and promotes a more integrated conception of "value".

Naynar, Ram and Maroun (2018:450) have three major aims. The authors adopted a mixed methods approach and performed document analysis, utilised questionnaires, performed factor analysis and statistical analysis. The first aim is to explore the emphasis placed on certain <IR> themes by financial services companies and stakeholders' perception of the importance of these themes. The second aim is to ascertain if a perception gap exists in reality. Lastly, they investigate if the perception gap is affected by user sophistication. Naynar et al. (2018) conclude that a perception gap is existent because companies do not fully comprehend the kind of information valued by their stakeholders. Furthermore, they find that sophistication has an impact

on the type of disclosures (valued by stakeholders) and the manner in which disclosures are presented.

Slack and Tsalavoutas (2018) investigated the decision-usefulness of <IR>. They conducted semi-structured interviews coupled with academic and content analysis. They found that the decision-usefulness of fund managers and equity analysts is low. This study is considered methodologically novel since this is one of the earliest studies to qualitatively evaluate <IR>'s decision-usefulness. In most of the capital market research, as summarised by Kothari (2001), decision-usefulness is evaluated quantitatively.

Chaidali and Jones (2017) explore the perceptions of <IR> preparers. They interviewed preparers of IARs. In conducting interviews, they were guided by Sztompka's (1999) theory on trust in social relationships. They find that composition of the IIRC Board impairs the credibility of the IAR and negatively influences their trust of this initiative. Chaidali and Jones (2017) also conclude that preparers are concerned about the credibility of a single report and seem uncertain of the benefits or the beneficiaries of <IR>. Lastly, preparers report problems stemming from a lack of adequate and clear guidance, high preparation costs, the format, and the length of the report.

There is a study by Du Toit (2017) that investigates the readability of IARs. The study assesses whether IARs are accessible to their readership and add value to stakeholders. Readability analyses are performed on the IARs for all the companies listed on the JSE in 2015 and 2016. By means of correlation analysis, a comparison was made between the readability results and the results of the Ernst & Young Excellence in <IR> Awards for 2015. Du Toit (2017) finds that the complex nature of the language used in IARs impairs their readability. Ultimately, this affects the value derived by stakeholders from the IAR information. Lastly, Du Toit (2017) finds that the correlation with the Ernst & Young Excellence in <IR> Awards indicates that an IAR is considered of higher quality if it is written using complex language.

Employing the expansion diffusion perspective, Gunarathne and Senaratne (2017) examine how and why <IR>, as managerial technology, is diffused in Sri Lanka. Semi-

structured interviews were conducted with key internal and external stakeholders who are active in the diffusion process in that country. From the current <IR> trends, the findings show that the country is at a diffusion stage where many first time adopters are likely to adopt it. Gunarathne and Senaratne (2017) find that the current diffusion stage is characterised by fashion setting, which is attributable to the active propagators in the supply side of <IR> diffusion. Gunarathne and Senaratne (2017) also note that <IR> is mainly a transition evolving through the incremental changes in sustainability reporting. Lastly, they conclude that many companies have not internalised <IR> principles thereby creating a danger of <IR> becoming a mere reporting mechanism.

Trébucq and Magnaghi (2017) explore the way the European Foundation for Quality Management (EFQM) model could be used to help managers understand the connectivity between the various capitals and consider it as a complementary management control systems tool for implementing an <IR>. Trébucq and Magnaghi (2017) adopt an elaborative coding approach together with a literature review. The results show that intellectual capital is taken into account in the framework of the EFQM model and that items on the EFQM model can be connected to the first intangible input, which affects the second intangible outcome. Lastly, the work demonstrates how the EFQM model could be used to improve the strategic thinking in conformity with IIRC's six capitals. It can be inferred that this study, relative to other studies presented above, is presented in a writing style that is difficult to follow because it contains tautology and complex language.

Focusing on a different construct of <IR>, Alexander and Blum (2016) perform a Luhmannian analysis of <IR>. Niklas Luhmann (1927–1998) was a German sociologist whose work described the world as set of complex systems evolving in an environment to be considered separately, i.e. differentiated (Alexander & Blum, 2016). They find that the <IR> framework has very little relevance to either sustainability or ecology. This finding reinforces what had been raised earlier by Flower (2015) when he argued that the IIRC abandoned sustainability accounting when they adopted the "value for investors" instead of "value for society".

Empirical studies, which focus on other constructs of <IR>, include the study of Burke and Clarke (2016). They discuss the business case for <IR> and challenges faced by

a firm when beginning its <IR> journey. Nineteen unstructured interviews were conducted. The results summarise experiences and suggestions from interviewees on the need for integrated thinking, the most effective use of the IIRC's <IR> framework, the best way to obtain high-quality data, the ideal audience of such reports, and the options for report assurance (Burke & Clarke, 2016). Had it not been for the interviews conducted, the content structure of this study qualifies it to be grouped with the conceptual studies. However, because there is data collection, the study is placed with the empirical group.

Mio, Marco and Pauluzzo (2016) investigate whether and how the implementation of <IR> principles advances control systems. They adopted the case study approach and conducted interviews, field observations and content analysis of internal documents. Head of the Group Integrated Reporting (GIR) function, the CFO, ten members of the GIR function, and nine members of the Generali <IR> working group, an Italian insurance company, participated in the interviews (Mio et al., 2016). The results show that the Generali IAR is able to advance MCS especially on increased connection with strategy and organisational culture, and increased usage of non-financial indicators, paying particular attention to the cause-effect relationships. Mio et al. (2016:216) did not find evidence of integration between MCS and external reporting because the GIR function does not issue any external reporting but note that an abstract IAR may have the potential to do so.

Perego, Kennedy and Whiteman (2016) review academic literature in <IR> in order to summarise extant knowledge. They also present sense-making approaches of three key experts affecting <IR> implementation at a global level. Semi-structured interviews, academic analysis and literature study were employed in the study. Perego et al. (2016) show that experts perceive the <IR> to be fragmented, and believe that most companies currently have a limited understanding of the business value of <IR>. Furthermore, the experts shared their insights on how they perceive the field to be progressing despite the prevailing challenges.

The study by Atkins and Maroun (2015) examines the shift in investors' attitudes towards environmental, social and governance (ESG) issues by the South African investment community. They determine what investors understand about the

objectives of preparing IARs and obstacles to the development of high quality IARs. Atkins and Maroun (2015) made use of semi-structured interviews with members of the institutional investor community. The results show that institutional investors welcomed the decision to introduce IARs for companies listed on the JSE. Furthermore, respondents confirmed a gradual shift in the recognition of the importance of ESG issues in corporate annual reports. The respondents asserted that IARs were beginning to include the interconnections between financial and non-financial measures and that fund managers were starting to incorporate traditionally "soft issues" into their formal investment analysis process (Atkins & Maroun, 2015). Lastly, they comment that their findings lend some weight to the assertions of the IIRC that <IR> signals the beginning of a comprehensive reporting philosophy and an integrated approach to thinking about business activities.

Reuter and Messner (2015) examine formal participation in the early phase of the IIRC's standard setting. Particularly, they shed light on the characteristics of lobbying parties and determinants of their lobbying behaviour towards the IIRC. They intend to identify and discuss the points of contestation regarding the IIRC's initial proposal for <IR>. Guided by Sutton's (1984) rational choice model of lobbying, Reuter and Messner (2015) performed quantitative and qualitative content analysis and got guidance from extant financial accounting lobbying research. They find that comment letters toward the IIRC's discussion paper are mainly written by large multinational firms (as opposed to small and medium-sized ones) and by preparers (as opposed to users). Perhaps this is the beginning of what is referred to by Flower (2015) as "regulatory capture". Active lobbying was done by sustainability service companies and professional bodies, which tend to take a critical position as compared to the discussion paper's emphasis on investor needs and value creation. Concerns were also gathered in the process that include the scope of the audience for <IR>, issues of materiality and the relationship between <IR>, and other existing reporting frameworks.

Robertson and Samy (2015) investigated the likely adoption of <IR> after highlighting the limitations of the current reporting frameworks. They conducted content analysis of 22 UK FTSE 100 annual and sustainability reports across industries. Semi-structured interviews were also conducted with ten senior managers. Robertson and

Samy (2015) find that low/medium levels of linkages exist between the majority of reports in the sample, thus limiting their usefulness. Senior managers perceive <IR> as having a relative advantage over existing practices and were supportive of <IR>. Lastly, the findings show that many companies are starting to integrate their reporting along the <IR> guidelines (Robertson & Samy, 2015).

The study by Higgins, Stubbs and Love (2014) explored how managers of early <IR> adopting Australian companies contribute to the institutionalisation of <IR>. Grounded in the institutional theory and guided by Gabriel's (2002) poetic analytics, the authors conducted interviews with 23 Australian managers. The results show that two main narratives dominate the managers' experiences, firstly, as storytelling and secondly, <IR> as meeting expectations. The two narratives are constructed simultaneously and they set up contrasting plots regarding important events, responsibilities and characters that are resolved through one or more of three "inter-narratives" that background these tensions. The inter-narratives suggest time, the company's strategy, and talking and engagement can solve problems (Higgins et al., 2014:1090).

Focusing on a different <IR> phenomenon, Rensburg and Botha (2014) investigate how financial information is used within the ambit of the new financial reporting standards by conducting a national online survey. They find that very few stakeholders use IARs as their main source of financial and investment information. In fact, IARs are seen as merely additional information while annual and interim financial statements are still the main reports used by stakeholders for financial and investment decisions (Rensburg & Botha, 2014). Lastly, stakeholders indicated that currently, they rarely use the internet for financial information but they indicated that they would increasingly prefer to do so (Rensburg & Botha, 2014).

The next study to be presented is by Steyn (2014) who evaluates the merits of <IR> and identifies the key challenges faced by organisations when implementing <IR>. A questionnaire survey and literature study was used in this study. The findings show that the overall benefits of implementing <IR> are greater than the cost involved. The results also show that, in an <IR> mandated regulatory regime, companies attach value to the <IR> process mainly from the perspective of corporate reputation, investor needs and stakeholder engagement and relations.

In another study not related to the ones elaborated on above, Stubbs and Higgins (2014) investigated the internal mechanisms employed by early adopters of <IR> in Australia to manage their reporting process. They also explored whether <IR> is stimulating innovative disclosure mechanisms. They conducted in-depth interviews with organisations in varying degrees of implementing <IR>. Twenty-three interviews were conducted with sustainability managers, finance managers and communications managers across the 15 organisations. The findings reveal that, while organisations are producing some form of IAR and are changing their processes and structures, their adoption of <IR> has not necessarily stimulated new innovations in the disclosure mechanisms (Stubbs & Higgins, 2014:1068).

Under the empirical studies category, Van Bommel (2014) examines the multiplicity of views on <IR> and considers the possibility of and impediments to reconciling these multiple rationales thus gaining legitimacy through a compromise. The paper empirically applies Boltanski and Thévenot's sociology of worth (SOW) framework to analyse <IR> in the Dutch reporting environment. SOW entails that, in order to avoid violence, social actors face an imperative to justify and legitimate themselves in moments of uncertainty or dispute. There are different forms of legitimacy (orders of worth) and these are market worth, industrial worth, civic worth, and domestic worth (Boltanski & Thévenot, 2006). Sixty-four semi-structured in-depth interviews were conducted and documentary analysis was performed. Data were ultimately coded for the presence of orders of worth and legitimating compromise mechanisms. The results show that <IR> combines the separate domains of industrial market, civic and green orders of worth. These logics of valuation need to be reconciled in a compromise in order for <IR> to become a legitimate reporting framework. Such a compromise however requires common interest, avoidance of clarification and maintenance of ambiguity. The researcher infers that these mechanisms are violated with the risk that <IR> gets captured by investors and accountants leading to local private arrangements rather than durable legitimate compromise (Van Bommel, 2014:1157).

The last study to be analysed under this category is by Solomon and Maroun (2012) who assess the impact of introducing <IR> on social, environmental and ethical reporting. These authors adopt the critical approach in performing content analysis to 10 IARs belonging to 10 JSE listed companies. The findings show a complex picture

of the impact of introducing <IR> where both positive and negative effects were witnessed. Firstly, there is a significant increase in the quantity of social, environmental, and ethical information disclosed in the IARs. A striking weakness in the integration of social, environmental and ethical information is the manner in which certain information items are repeated, often excessively, throughout the reports. Lastly, the findings reveal a substantial increase in the reporting of social and environmental information as compared to social information.

The different studies in this category address various aspects of <IR>, however they fall short in addressing how companies have implemented <IR>. This study is therefore deemed unique in that it looks at <IR> in totality by not focusing on only one element. The study first develops the PAI and then utilises that PAI to measure the quality of IARs for JSE listed companies. This aspect was not addressed by any of the studies mentioned in the above categories. Moreover, this study qualitatively establishes and interrogates the factors that contributed towards the current IRQ level. In Table 4.2, a summary of all major empirical studies considered in the study, which investigates various <IR> constructs, is presented.

Table 4.2: Summary Table of major empirical studies, which investigate various <IR> constructs

Authors	Journal	Research Purpose	Research Method	Conclusions
Adams, 2017	Accounting, Auditing & Accountability	To examine and explain the interrelationships, which influence the ability of firms to create value. It also examines the interrelationships between environmental, social and governance risks.	Interviews were conducted with board chairs and non-executive directors of large listed companies on the JSE and the Australian Stock Exchange.	The research finds that contemporary reporting processes influence cognitive frames enhancing board oversight and assisting organisations in managing complexity. This leads to increased awareness of the impact of ESG issues on value creation despite investor disinterest. The author claims that this is the first academic paper that provides a coherent framework of <IR> with a template
Alexander and Blum, 2016	Ecological Economics	Luhmannian analysis of <IR>	Luhmannian complex systems approach	<IR> framework, as finalised, has little relevance to either sustainability or ecology.
Al-Htaybat and Alberti-Alhtaybat, 2018	Accounting, Auditing & Accountability	To investigate the link between integrated thinking (IT) and <IR> in a global player.	Video, document/text and interview material are used to investigate the perception and status quo of IT at the case organisation. Data were analysed in two coding stages	The study contributes the organisational habitus of handling uncertainty and disruption, which governs the IT and <IR> initiative and development in the case organisation. Furthermore, it illustrates an empirical example of how an organisation has grown its IT approach over time and has introduced <IR> as a reflection on the IT approach.
Atkins and Maroun, 2015	Meditari Accountancy Research	To examine the shift in investors' attitudes towards environmental, social and governance (ESG) issues by the South African investment community; the drivers of <IR>; what investors understand about the objectives of preparing IARs; and obstacles to the development of high quality IARs.	Semi-structured interviews with the South African institutional investor community	South African institutional investors have welcomed the decision to introduce IARs for companies listed on the JSE. Respondents confirmed a gradual shift in the recognition of the importance of ESG issues in corporate reports. Several interviewees noted that IARs were beginning to include the interconnections between financial and non-financial measures and that fund managers were starting to incorporate traditionally "soft issues" in their formal investment analysis process.

Table 4.2 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Burke and Clarke, 2016	Business Horizons	Discusses the business case for <IR> and challenges a firm faces when beginning its <IR> journey	19 unstructured panel interviews	Summarise experiences and tips from interviewees on the need for integrated thinking, the most effective use of the IIRC's <IR> framework, the best way to obtain high-quality data, the ideal audience of such reports, and the options for report assurance.
Chaidali and Jones, 2017	Critical Perspectives on Accounting	Exploring the perceptions of <IR> preparers	Interview preparers, Building on Sztompka's (1999) theory on trust in social relationships	Composition of the IIRC Board impairs the credibility of the IAR and negatively influences its trust of this initiative. Preparers are concerned about the credibility of a single report and seem uncertain of the benefits or the beneficiaries of <IR>. Preparers report problems stemming from a lack of adequate and clear guidance, high preparation costs, the format, and the length of the report.
Dumay and Dai, 2017	Meditari Accountancy Research	To investigate the concept of integrated thinking as part of the IIRC's <IR> framework. It explores integrated thinking as a cultural control and analyses how it operates.	Case study using semi-structured interviews	The responsible banking culture that was in place prior to joining the Pilot Programme is a stronger cultural control, alongside personnel, results and action controls. Integrated thinking clashes with the existing organisational culture rather than driving a new organisational culture.
Du Toit, 2017	Meditari Accountancy Research	To investigate the readability of IARs. To assess whether IARs are accessible to their readership and add value to stakeholders	Readability analyses are performed on the IARs of all companies listed on the JSE for 2015 and 2016. Readability results are compared by means of a correlation analysis to the results of the Ernst & Young Excellence in <IR> Awards for 2015.	The complex nature of the language used in IARs of listed companies impairs readability and, as an implication, affects the value stakeholders can derive from the information. The correlation with the Ernst & Young Excellence in Integrated Reporting Awards indicates that an IAR is considered of higher quality if it is written using complex language.

Table 4.2 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Feng, Cummings and Tweedie, 2017	Journal of Intellectual Capital	To explore how key stakeholders interpret integrated thinking; and how pilot organisations are applying integrated thinking in practice.	In-depth semi-structured interviews with key <IR> stakeholders in Australia, including two <IR> pilot organisations, one professional association, an accounting professional body, an accounting firm and two IIRC officials.	The IIRC has not fully defined and articulated the concept of integrated thinking, and there is no shared consensus among practitioners. There is evidence of an evolving understanding of integrated thinking within practice. What remains unclear is how this understanding will develop over time
Gibassier, Rodrigue and Arjaliès, 2018	Accounting, Auditing & Accountability Journal	To analyse the process through which an IIRC pilot company adopted <IR>.	A seven-year longitudinal ethnographic study based on semi-structured interviews, observations, and documentary evidence.	The company envisioned <IR> as a "rational myth" (Hatchuel, 1998; Hatchuel & Weil, 1992). This conceptualisation acted as a springboard for <IR> adoption. The company challenged the vision of <IR> suggested by the IIRC to stay true to its conceptualisation of IR and eventually chose to implement its own version of an IAR.
Gunarathne and Senaratne, 2017	Managerial Auditing Journal	To examine how and why <IR> is diffused in Sri Lanka.	Key stakeholders in the process of <IR> diffusion in the country were interviewed. Content analysis of these semi-structured interviews was carried out.	The trend of <IR> suggests that the country is in the diffusion stage with many first time adopters likely to adopt <IR>. However, in the diffusion stage, most of the adopters are driven by fashion setting, which is attributable to the active propagators in the supply side of <IR> diffusion.
Guthrie, Manes-Rossi and Orelli, 2017	Meditari Accountancy Research	To explore the linkages between <IR> and organisations' internal processes.	Academic analysis on various literature and in-depth semi-structured interviews. Detailed case studies of five Italian public sector organisations	The processes of change in organisations adopting <IR> is their espousal of a way of thinking, that is, integrated thinking, as a result of the process of internalisation.

Table 4.2 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Higgins, Stubbs and Love, 2014	Accounting, Auditing & Accountability Journal	To explore how the managers of early adopting Australian firms contribute to the institutionalisation of <IR>	This study is situated within institutional theory. The authors undertook semi-structured interviews with 23 Australian managers. The authors drew on Gabriel's (2002) poetic analytics to show how the sense making activities of the early adopters contribute to the institutionalisation process.	Two main narratives dominate our managers' experience: <IR> as storytelling and <IR> as meeting expectations. These two narratives are constructed simultaneously and they set up contrasting plots regarding salient events, responsibilities and characters that are resolved through one or more of three "inter-narratives" that background these tensions. The inter-narratives suggest that time, the company's strategy, and talking and engagement can solve problems.
La Torre, Valentinetti, Dumay and Rea, 2018	Journal of Intellectual Capital	To examine the potential for eXtensible Business Reporting Language (XBRL) to go beyond static reporting. A taxonomy structure of information is developed for providing a knowledge base and insights for an XBRL taxonomy for <IR>	Design Science (DS) research, as a pragmatic exploratory research approach, is embraced to create a new "artefact" and thematic content analysis is used to analyse <IR> in practice	Using XBRL for <IR> allows a shift from static and periodic reporting to more relevant and dynamic corporate disclosure for stakeholders. The bi-dimensional taxonomy structure allows users to navigate disclosure from two different perspectives (content elements (CE) and capitals). The findings demonstrate the need to codify sector-specific information for the CE as to direct the efforts toward the development of sector-specific taxonomy extensions in developing an XBRL taxonomy for <IR>
Lai, Melloni and Stacchezzini, 2018	Accounting, Auditing & Accountability Journal	To analyse how the preparers' mode of cognition influences the patterns of accountability associated with <IR>.	A functionalist approach to narratives. In-depth interviews with the <IR> preparers of a global insurer that has used <IR> since 2013.	The preparers' narrative mode of cognition facilitates dialogue with <IR> users. It addresses accountability tensions by revealing the company's value creation process. Preparers' efforts to establish a meaningful dialogue with a growing variety of stakeholders reveals the potential of <IR> as a narrative source of a socialising form of accountability. However, financial stakeholders remain the primary addressees of the reports

Table 4.2 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
McNally and Maroun, 2018	Accounting, Auditing & Accountability Journal	To challenge the notion that non-financial reporting is mainly about impression management or is only a superficial response to the hegemonic challenges posed by the sustainability movement.	Case study method is used; data are collected using detailed interviews with all staff members involved in the preparation process. These are complemented by a review of the minutes of the company's sustainability workshops and IARs.	A decision by the case organisation to prepare an IAR gives rise to different forms of resistance, which limits the change potential of the <IR> initiative. Accounting for financial and non-financial information expands the scope of the conventional accounting system, which facilitates broader management control and promotes a more integrated conception of "value".
McNally, Cerbone and Maroun, 2017	Meditari Accountancy Research	Exploring challenges to preparing IAR. This is done using an integrated thinking framework, which stresses the importance of an interconnection between sustainability performance, proactive sustainability management and <IR>.	Detailed interviews with 26 preparers at nine South African-based organisations highlight practical issues encountered when producing an IAR	<IR> is not consistently seen as a natural part of the business process. The new report format is imposed on existing internal processes and reporting protocols, which precludes a broad understanding of the purpose of <IR> and limits the development of management control systems. Reporting guidelines are used as disclosure checklists, stakeholder engagement is limited, systems are not always compatible and data analysis is difficult.
Mio, Marco, Pauluzzo, 2016	Journal of Cleaner Production	To investigate whether and how the internal implementation of <IR> principles can advance management control systems (MCS).	Case study, interviews, field observations and internal document analysis. Authors interviewed the head of the Group <IR> and CFO Hub-GIR function, nine members of the Generali working group on IIR and ten other members of the GIR	Generali IIR seems to be able to advance MCS in terms of increased connection with strategy and organisational culture; increased usage of non-financial indicators; better understanding of cause-effect relationships. No evidence of integration between MCS and external reporting was found (because the GIR function does not issue any external reporting), but an abstract IAR may have the potential to do so

Table 4.2 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Naynar, Ram and Maroun, 2018	Meditari Accountancy Research	To explore the emphasis placed on certain <IR> themes by financial services companies and stakeholders' perceptions of the importance of these themes to ascertain if a perception gap exists. To investigate if the perception gap is affected by user sophistication.	Mixed methods approach, document analysis, questionnaire, factor analysis and statistical analysis	A perception gap has developed because companies do not fully understand what information their stakeholders' value. In addition, this study demonstrates that sophistication has an effect on the type of disclosures, which are valued by users and the manner in which the disclosures are presented.
Perego, Kennedy and Whiteman, 2016	Journal of Cleaner Production	To review the embryonic academic literature in the <IR> field in order to summarise extant knowledge. To present the sense making approaches of three key experts affecting <IR> practices at the global level using semi-structured interviews.	Literature study, academic analysis and semi-structured interviews	Experts perceive the field to be fragmented, and believe that most companies currently have a weak understanding of the business value of <IR>. The experts give insights into how they perceive the field to be progressing despite challenges and where they see improvements in the diffusion of practices in <IR>.
Rensburg and Botha, 2014	Public Relations Review	To investigate how financial information is consumed within the ambit of the new financial reporting standards	National online survey	Very few stakeholders use the IARs as their main source of financial and investment information and these reports are seen as additional information. Annual and interim financial reports by companies are still the mainstay for corporate financial information.

Table 4.2 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Reuter and Messner, 2015	Accounting, Auditing & Accountability Journal	To examine formal participation in the early phase of the IIRC's standard setting. The paper sheds light on the characteristics of lobbying parties and the determinants of their behaviour. To identify and discuss the points of contestation regarding the IIRC's initial proposal for <IR>.	Quantitative and qualitative content analysis guided mainly by Sutton's (1984) rational-choice model of lobbying and by findings from extant financial accounting lobbying research.	The paper improves the understanding of the political nature of standard setting in the context of <IR>. Comment letters were by large multinational firms and by preparers. Active lobbying is by sustainability service firms and professional bodies. Respondents voiced different concerns regarding, for instance, the scope of audience of <IR>, issues of materiality and the relationship between <IR> and other reporting frameworks.
Robertson and Samy, 2015	Sustainability Accounting, Management and Policy Journal	To investigate the likely adoption of <IR> after highlighting the limitations of the current reporting frameworks.	Content analysis of 22 UK FTSE 100 annual and sustainability reports across industries. Semi-structured interviews were conducted with ten senior mangers	Low/medium levels of linkages exist between the majority of reports in the sample, thus limiting their usefulness. Senior managers perceive <IR> as having a relative advantage over existing practice. Senior managers interviewed were supportive of <IR> and this research revealed that many companies are starting to integrate their reporting along <IR> guidelines
Slack and Tsalavoutas, 2018	Accounting Forum	To investigate the decision-usefulness of <IR>	Semi-structured in-depth interviews, academic analysis and content analysis.	The interviews reveal that usefulness of <IR> to fund managers and equity analysts is low.
Solomon and Maroun, 2012	ACCA publication	To assess the impact of the required introduction of <IR> on social, environmental and ethical reporting.	Interpretative/critical approach in performing content analysis. 10 JSE listed companies were sampled	There is a significant increase in the quantity of social, environmental and ethical information that appears in a significantly greater number of sections of the reports for 2010/11 than for 2009. A weakness of repetition is found throughout the reports. There has also been a substantial increase in the reporting of social and environmental information compared with ethical information.

Table 4.2 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Steyn, 2014	Sustainability Accounting, Management and Policy Journal	To evaluate the merits of <IR> from the perspective of organisations, and to identify the key implementation challenges associated with this process.	Literature study and questionnaire survey.	Overall finding is that benefits are perceived to exceed the cost involved of implementing <IR>. Listed companies in a mandated regulatory regime implemented in a short period attach value to the <IR> process primarily from the perspective of their corporate reputation, investor needs and stakeholder engagement and relations.
Stubbs and Higgins, 2014	Accounting, Auditing & Accountability Journal	To investigate the internal mechanisms employed by early adopters of <IR> in Australia to manage their reporting process. To explore if <IR> is stimulating innovative disclosure mechanisms.	In-depth, semi-structured interviews with organisations in varying stages of implementing <IR>. Twenty-three interviews were conducted with managers across 15 organisations.	While the organisations that are producing some form of IAR are changing their processes and structures, or at least talking about it, their adoption of <IR> has not necessarily stimulated new innovations in disclosure mechanisms
Trébucq and Magnaghi, 2017	Research in International Business and Finance	To explore how EFQM model could help managers understand the connectivity between various capitals and consider it as a management control systems tool.	This paper focuses on a qualitative analysis of the EFQM model. The literature review helps in finding new categories of intellectual capital for this coding.	The study shows that intellectual capital is taken into account in the framework of the EFQM model from a dynamic perspective. Items of the EFQM model can be connected to the first intangible, considered as input, which affects a second intangible, considered as an outcome.
Van Bommel, 2014	Accounting, Auditing & Accountability Journal	To examine the multiplicity of views on <IR> and to consider the possibility of, reconciling these multiple rationales. This sheds light on the understanding of <IR> and shows how legitimacy struggles are resolved in practice around complex accounting practices in heterogeneous environments.	This paper empirically applies Boltanski and Thévenot's sociology of worth framework to analyse <IR> in the Dutch reporting field through 64 semi-structured in-depth interviews and content analysis. Data were coded for the presence of orders of worth and legitimating compromise mechanisms	Findings suggest that <IR> combines the disparate domains of industrial, market, civic and green order of worth. These different logics of valuation need to be reconciled in a compromise in order for <IR> to become a legitimate practice. Such a compromise requires a common interest, avoidance of clarification and maintenance of ambiguity. The author's analysis suggests these mechanisms are violated though, with the risk that <IR> is captured by investors and accountants, leading to local private arrangements rather than durable legitimate compromise.

4.4 <IR> in the not-for-profit entities

The third category of literature to be presented is that of studies, which explain the role of <IR> in the not-for-profit organisations. Brusca, Labrador and Larran (2018) examine the developments for the implementation of sustainability and <IR> at a Spanish university. This is done by critically analysing what, why, who and how the new models of reporting have been implemented. Brusca et al. (2018) adopt the case study approach using documentary analysis and qualitative data from semi-structured interviews. The findings show that the report is mainly focused on social and sustainability values and therefore cannot be deemed an IAR that connects all the capitals creating value in the short, medium and long term (Brusca et al., 2018).

The results confirm the findings presented by Veltri and Silvestri (2015) who conducted a similar study at a South African public university. Veltri and Silvestri (2015) explore the IAR of a South African public university by comparing it to the <IR> framework. The main intention was to verify whether the university's IAR matches the aims of the <IR> framework. The study adopts a case study approach and utilises content analysis and academic analysis in performing the comparisons. Veltri and Silvestri (2015) find that the university's IAR includes the content elements of the <IR> framework merely as labels but does not deepen their meaning. Furthermore, the findings show that the university does not follow the IIRC's guiding principles in preparing their IAR. Lastly and most importantly, data in the university's IAR does not have an outlook orientation. This is because the information is not interconnected, the stakeholder relationships are not highlighted, and the organisational ability to create value is not disclosed. As pointed out above, these findings confirm the results from a study by Brusca et al. (2018) who find similar results for a Spanish university.

These results call into question the suitability of the <IR> framework in the not-for-profit organisations as was argued in section 3.11. Moreover, as argued in section 3.11, the IIRC should consider developing a completely new framework to cater for not-for-profit organisations. The International Accounting Standards Board (IASB) successfully implemented the same ideation when they created the financial reporting standards for small to medium enterprises as opposed to adapting the regular international financial reporting standards for SMEs. It is noted though that Adams and

Simnett (2011), in their study analysed below, come to a different conclusion. They contend that <IR>, as is, has a lot to offer to not-for-profit organisations.

The last study to be presented under this category is that by Adams and Simnett (2011) who examine the applicability of <IR> principles to the Australian not-for-profit sector. In the process, they show the opportunities available to improve corporate reporting for both profit organisations and not-for-profit organisations. They further unpack the potential barriers, which may hinder the full implementation of <IR> in the Australian not-for-profit sector. Adams and Simnett (2011) perform conceptual analysis and academic analysis in order to achieve their objectives. They infer that <IR> is a new paradigm that is holistic, strategic, responsive, material and relevant across multiple time frames. Adams and Simnett (2011) further argue that <IR> represents a journey to more meaningful reporting that has ample potential to improve Australia's corporate reporting including that of not-for-profit organisations. The authors posit that there are nascent opportunities for <IR> to guide the future of not-for-profit organisations.

As argued above and, in section 3.11, the researcher expresses some reservations that, as is, <IR> will not have much impact on not-for-profit organisations. The second remark is that this category still needs more attention from researchers in order to examine the suitability of <IR> for not-for-profit organisations. This study is not addressing <IR> in not-for-profit organisations, but it is considered relevant where suggestions and recommendations target the not-for-profit sector. Lastly, Table 4.3 below summarises the studies examined under the not-for-profit category with the authors' names, journal name, research purpose, research method(s) and the conclusions drawn for all the studies interrogated in this category.

Table 4.3: Summary Table for major studies investigating <IR> in the not-for-profit entities

Authors	Journal	Research Purpose	Research Method	Conclusions
Adams and Simnett, 2011	Australian Accounting Review	To examine the applicability of the principles of <IR> and opportunities for implementation in the Australian NFP sector and briefly consider some potential barriers to show how <IR> provides an exciting opportunity for all organisations – for-profit and NFP – to engage in more holistic, useful and meaningful reporting.	Conceptual analysis and academic analysis	<IR> represents a journey to more meaningful reporting that can be instrumental for Australia's reporting organisations, including not-for-profit entities. There are nascent opportunities for <IR> to guide the future of not-for-profit reporting in Australia.
Brusca, Labrador and Larran, 2018	Journal of Cleaner Production	Examining the developments for the implementation of sustainability and <IR> at a university	Case study using documentary analysis and qualitative data from interviews	The report is mainly focused on social and sustainability values and cannot be considered an IAR that connects all the capitals creating value
Veltri and Silvestri, 2015	Journal of Intellectual Capital	To explore the IAR of a South African public university (UFS), by comparing it with the <IR> framework, to verify whether UFS' IAR matches the <IR> framework's main aim, which is integrating Intellectual Capital and non-Intellectual Capital information into a single report for stakeholders.	Case study approach	UFS' IAR includes the content elements of the <IR> framework as labels, but it does not deepen their meaning. As regards the IIRC guidelines and principles, the analysis of the UFS IAR shows that it does not seem to follow them. Briefly, the data do not have an outlook orientation, the information is not interconnected, the stakeholder relationships are not highlighted and the organisational ability to create value is not disclosed.

4.5 Economics-based archival studies

The fifth category of studies to be analysed and synthesised is that of archival studies that are methodologically economics-based and fall into the category of capital markets research. While the studies are grouped because of a similar method and because of a common theme, however, they have varied sub-themes. In a majority of cases, the sub-themes are not related to each other and this makes synthesis (between different studies) impossible. But, in some cases where there are related studies, there was synthesis while, in in other cases, discussions and explanations were presented.

The first study in this category is that by Bernardi and Stark (2018) who study the impact of the reporting regime change in South Africa on analyst forecast accuracy over the period 2008 to 2012 to evaluate users' perceptions of the usefulness of <IR>. The findings show that the environmental, social and governance (ESG) disclosure levels were not robustly associated with analyst forecast accuracy before the <IR> regime was introduced. ESG disclosure levels, particularly environmental disclosure levels, are associated with forecast accuracy after the introduction of the <IR> regime. The results may be interpreted to mean that <IR> therefore has the potential to provide useful information on the links between ESG and financial performance. Lastly, the findings suggest that <IR> can provide useful information for the capital markets. This confirms the finding from the study by Barth, Cahan, Chen and Venter (2017), which is presented below.

The purpose of the study by Barth et al. (2017) was to examine the economic consequences associated with IRQ by performing correlation analysis. The findings show a positive association between IRQ and liquidity, between IRQ and the expected future cash flows and that <IR> provides useful information for capital markets. Pavlopoulos, Magnis and Iatridis (2017) who examine the association between disclosure quality and corporate governance, confirm the same finding. They perform univariate analysis, the Jones model and panel data regression analysis. The results show that higher quality <IR> information decreases agency costs. This study therefore corroborates the findings by the two studies presented above (Bernardi & Stark, 2018; Barth et al., 2017) that show that <IR> can provide useful information for

the capital markets. In a study that uses South African data over the period 2009 to 2012, Zhou, Simnett and Green (2016) investigate the benefits of <IR> to capital markets using multivariate statistical analyses. The results confirm the findings presented above (Barth et al., 2017; Pavlopoulos et al., 2017) where <IR> can provide incrementally useful information for the capital markets. This is shown where improved IRQ is associated with a subsequent reduction in the cost of equity capital. Furthermore, Zhou et al. (2016) show that analysts' forecasting errors and dispersion reduces as the level of IRQ increases.

Melloni, Caglio and Perego (2017) examine a selection of performance determinants in order to gain a clearer understanding of the factors associated with conciseness, completeness and balance in the <IR>. The authors adopted content analysis, correlation analysis and multivariate analysis. Their results show that, in the presence of a company's weak financial performance, IAR tends to be longer, less readable and less balanced. In other words, the IAR becomes less concise and less balanced. Furthermore, the study finds that companies with inferior social performance provide IARs, which are less concise and have less information on their sustainability performance. The study also finds that some early adopters of <IR> employ impression management strategies in the form of quantity and syntactical reading ease manipulation. These strategies depend not only on the level of a company's performance, but also on the type of performance.

In an earlier and closely related study using impression management studies, Stacchezzini, Melloni and Lai (2016) analyse how <IR> communicates managerial aspects of corporate sustainability. The authors perform content analysis and multivariate statistical analysis. Their results show that companies offer biased <IR> disclosures. Furthermore, they find that companies do not only provide limited forward looking and quantitative disclosure of their actions, but also avoid providing information about their sustainability performance when their social and environmental results are poor. These results confirm the results from the study by Melloni, Caglio and Perego (2017) who also find the use of impression management in order to cover up negative news.

Oshika and Saka (2017) propose key performance indicators that decipher a

company's sustainability through empirical analysis. The study utilises the Ohlson model. The findings show that the value added that is distributed to stakeholders is significantly larger, and the stability of profitability and the profitability itself are significantly higher in sustainable firms.

Baboukardos and Rimmel (2016) examine the value relevance of accounting information under an <IR> approach. Using a sample of 954-year observations, the authors employ a linear price level model. The results show a decline in the value relevance of net assets.

In another study, Fiori, Di Donato and Izzo (2016) analyse the association between corporate governance factors and the voluntary decision to prepare an IAR according to the <IR> framework. Using literature from Agency and Signalling Theories, Fiori et al. (2016) perform probit regression, run with regard to a sample of 35 companies that joined the IIRC pilot programme and 137 that did not. The results show a positive association between the decision to prepare an IAR and some of the corporate governance factors, particularly "board size", "activity" and "gender diversity". Furthermore, the results show that the association is statistically significant to some of the governance factors and insignificant in others (Fiori et al., 2016).

Lee and Yeo (2015) examine the association between <IR> and firm valuation. They perform correlation analysis and regression analysis. The findings show that firm valuation is positively associated with <IR> disclosures. Furthermore, Lee and Yeo (2015) answer the question of whether <IR> adoption has benefits by empirically showing that the benefits of <IR> adoption exceed the costs. In fact, this finding confirms the assertion by <IR> adoption proponents (Adams, 2015; Eccles & Serafeim, 2014; 2011) who conceptually contend that <IR> brings more benefits than costs.

Serafeim (2014) examines the relationship between <IR> and the composition of a firm's investor base. The author uses statistical analysis to establish the association. The results show that firms that practice <IR> have a more long-term oriented investor and more dedicated and fewer transient investors. Serafeim (2014) shows that investor activism on environmental and social issues leads to a firm practising more

<IR> and this ultimately has an impact on the composition of a company's investor base. Lastly, the study finds that firms, which report more information about the different forms of capital or, which align their IARs more closely with the <IR> framework show a more long-term oriented investor base (Serafeim, 2014).

The next study, by Frías-Aceituno, Rodríguez-Ariza and García-Sánchez (2013a), investigated the influence of certain features of the Board of Directors in the degree of information integration presented by leading non-financial multinational firms. Using data from 568 companies from 15 countries for the period 2008 to 2010, the authors performed regression analysis. The results show that growth opportunities, size of a company and its management bodies, together with gender diversity, are the most important factors in the integrated dissemination of information. This effect is prevalent in the Anglo-Saxon, Germanic and Latin models of corporate governance (Frías-Aceituno et al., 2013a).

Frías-Aceituno, Rodríguez-Ariza and García-Sánchez, 2013b conducted another study, which examined the influence of the legal system on the development of IARs. The sample was made up of 750 international companies for the years 2008 to 2010. The authors adopted the logit methodology, which they applied to panel data. The study finds that companies situated in civil law jurisdictions where indices of law and order are high, are more likely to create and publish a broad range of IARs (Frías-Aceituno et al., 2013b).

The penultimate study to be presented under this theme is by García-Sánchez, Rodríguez-Ariza and Frías-Aceituno (2013). The authors examined the impact of the Hofstede national cultural system on <IR>. Hofstede (1983) defines culture as the collective programming of the mind, distinguishing the members of one group or category of people from those of another. In this study, the term is applied to groups such as nations or corporations. Four specific cultural features that highlight the similarities and differences between countries are: individualism versus collectivism; masculinity versus femininity; tolerance versus aversion to uncertainty; and power distance which refers to the level of hierarchy in society (Hofstede, 2001). The Hofstede National Cultural System is meant to be a representative of the values of stakeholders. García-Sánchez et al. (2013) performed regression analysis on the 2000

largest companies on the Forbes Global 2000 list for the period 2008 to 2010. The results show that companies located in societies with stronger collectivist and feminist values are in the vanguard of information integration.

The last study to be analysed under this category is by Jensen and Berg (2012) who analyse similarities and differences between companies with traditional sustainability reporting and those that publish IARs. They perform non-parametric testing, particularly, the Pearson Chi-square tests of independence and the Kolmogorov-Smirnov Z-tests. Jensen and Berg (2012) show that <IR> companies are different from sustainability reporting companies with regard to several country level determinants, particularly investor and employment protection laws. Furthermore, the intensity of market coordination and ownership concentration, the level of economic, environmental and social development, the degree of national corporate responsibility and the value system of the country of origin proved to be relevant (Jensen & Berg, 2012). Table 4.4 below summarises the major studies presented under the economics-based archival studies category.

Table 4.4: Summary Table for major economics-based archival studies

Authors	Journal	Research Purpose	Research Method	Conclusions
Baboukardos and Rimmel, 2016	Journal of Accounting and Public Policy	To examine the value relevance of accounting information under an <IR> approach	A sample of 954 firm-year observations and employ a linear price-level model	A decline in the value relevance of net assets.
Barth, Cahan, Chen and Venter, 2017	Accounting, Organizations and Society	To examine the economic consequences associated with IRQ	Correlation analysis	A positive association between IRQ and liquidity. A positive association between IRQ and expected future cash flows.
Bernardi and Stark, 2018	The British Accounting Review	To study the impact of the reporting regime change in South Africa on analyst forecast accuracy over the period 2008 to 2012, as a way of evaluating users' perceptions of the usefulness of IR.	A regression approach to testing hypotheses	ESG disclosure levels are not robustly associated with analyst forecast accuracy before the <IR> regime was introduced. ESG disclosure levels, in particular, environmental disclosure levels, are associated with forecast accuracy after the introduction of the <IR> regime.
Fiori, Di Donato and Izzo, 2016	Performance Measurement and Management Control: Contemporary Issues	Using literature of Agency and Signalling Theories, to analyse the corporate governance factors associated with the voluntary decision to prepare an IAR according to the <IR> framework	Probit regression run with regard to a sample of 35 companies that joined the Pilot Programme in 2011 and 137 similar companies that did not	The association between the variables "board size", "activity" and "gender diversity" and the decision to join the Pilot Programme is positive, but this relation is statistically significant only in some of them.
Frías-Aceituno, Rodríguez-Ariza and García-Sánchez, 2013	Corporate Social Responsibility and Environmental Management	To demonstrate the influence played by certain features of the Board of Directors in the degree of information integration presented by leading non-financial multinational firms.	Regression analysis. 568 companies from 15 countries for the period 2008–2010.	The results obtained show that growth opportunities, the size of a company and its management bodies, together with gender diversity, are the most important factors in the integrated dissemination of information. This effect has been confirmed for the Anglo-Saxon, Germanic and Latin models of corporate governance
Frías-Aceituno, Rodríguez-Ariza and García-Sánchez, 2013	Journal of Cleaner Production	To examine the influence of one of the most important institutional factors, the legal system, on the development of IARs	Logit methodology is applied to panel data	Companies located in civil law countries, and where indices of law and order are high, are more likely to create and publish a broad range of IARs.

Table 4.4 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
García-Sánchez, Rodríguez-Ariza and Frías-Aceituno, 2013	International Business Review	To examine the impact of the Hofstede National Cultural System on <IR>, in comparison with the provision of various unrelated documents on corporate performance	Regression analysis. 2000 largest companies on the Forbes Global 2000 list for the period 2008–2010	Companies located in societies with stronger collectivist and feminist values are in the vanguard of information integration
Jensen and Berg, 2012	Business Strategy and the Environment	To analyse similarities and differences between companies with traditional sustainability reporting (TSR) and those that publish IARs	Non-parametric testing	<IR> companies are different from TSR companies with regard to several country-level determinants, particularly investor and employment protection laws. The intensity of market coordination and ownership concentration, the level of economic, environmental and social development, the degree of national corporate responsibility and the value system of the country of origin proved to be relevant
Lee and Yeo, 2015	Review of Quantitative Finance and Accounting	To examine the association between <IR> and firm valuation	Correlation analysis and regression analysis	Firm valuation is positively associated with <IR> disclosures. The benefits of <IR> exceed its costs.
Melloni, Caglio and Perego, 2017	Journal of Accounting and Public Policy	To examine a selection of performance determinants to gain insights into the factors associated with conciseness, completeness and balance in <IR>.	Content analysis, correlation analysis and multivariate analysis	In the presence of a firm's weak financial performance, <IR> tends to be significantly longer, less readable and more optimistic. The study additionally found that firms with inferior social performance provide reports that are less concise and have less information on their sustainability performance. Early adopters of <IR> employ quantity and syntactical reading ease manipulation as well as thematic content and verbal tone manipulation as impression management strategies. The results also suggest that such strategies depend not only on the level of firms' performance but also on the type of performance (financial versus sustainability).

Table 4.4 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Oshika and Saka, 2017	Social Responsibility Journal	To propose KPIs for <IR>, which decipher a firm's sustainability through empirical analysis.	Ohlson model	The value added that is distributed to stakeholders other than shareholders is significantly larger, and the stability of profitability and the profitability itself are significantly higher in sustainable firms.
Pavlopoulos, Magnis and latridis, 2017	Journal of Multinational Financial Management	To examine the association between <IR> disclosure quality and corporate governance mechanisms. Additionally, the impact of the accounting information provided by <IR> regarding the level of earnings quality and agency costs is tested	Univariate analysis The Jones (1991) model, panel data regression analysis	Higher quality <IR> information decreases agency costs.
Serafeim, 2014	Journal of Applied Corporate Finance	To examine the relation between <IR> and the composition of a firm's investor base	Statistical analysis	Firms that practice <IR> have a more long-term oriented investor base with more dedicated and fewer transient investors. Investor activism on environmental or social issues leads a firm to practice more <IR> and this investor or crisis-induced <IR> affects the composition of a firm's investor base. Firms that report more information about the different forms of capital exhibit a more long-term oriented investor base.
Stacchezzini, Melloni and Lai, 2016	Journal of Cleaner Production	Using impression management studies, the study aims to analyse how <IR> adopters communicate managerial aspects of corporate sustainability.	Content analysis and multivariate statistical analysis	Firms offer biased <IR> disclosures. Firms not only provide limited forward-looking and quantitative disclosure of their actions to achieve sustainability outcomes but also avoid providing information about their sustainability performance when their social and environmental results are poor.

4.6 Case studies that focus on why and how entities may adopt <IR>

This category focuses on studies that investigate why entities adopt <IR>, particularly in those jurisdictions where it is voluntary. These studies adopt the case study approach. The number of the studies available under this category shows that there is still a lot of work to be done in order to address why entities may adopt <IR>.

The first study is Macias and Farfan-Lievano (2017) who evaluate the implementation of <IR> in a group of Colombian enterprises. They adopt the multiple-case study approach in six enterprises that use <IR>. The authors conducted interviews with the IAR preparers. They also performed documentary analysis. Macias and Farfan-Lievano (2017) show that the Colombian firms that use <IR> have ambitious expansion goals in the medium term. The main reason for adopting <IR> is that it facilitates access to resources from new foreign investors. In other words, they adopt <IR> for impression management purposes with the aim of increasing foreign direct investment in their entity (Macias & Farfan-Lievano, 2017).

The second study is by Lueg et al. (2016) who investigate the motivations of diverse stakeholders in fostering the adoption of standards and guidelines for corporate social responsibility (CSR) after <IR> became mandatory in Denmark. They used the case study approach on the Danish carpet manufacturer EGE. The case was interpreted from the pragmatic constructivism perspective, which focuses on integrating four dimensions, namely, facts, possibilities, values, and communication. Lueg et al. (2016) show that EGE follows a strategy of "enlightened shareholder value" where CSR is an essential value driver. The CSR practices seemed helpful in integrating measurable plans to the strategy, and for controlling CSR implementation. Furthermore, Lueg et al. (2016) find that the long and technical CSR reports did not effectively communicate EGE's values and possibilities as compared to the EGE's IAR. Because there is a paucity of research on this category, more work needs to be done. Table 4.5 below shows the major case studies interrogated that focus on why and how entities, may adopt <IR>.

Table 4.5: Case studies, which focus on why and how entities, may adopt <IR>

Authors	Journal	Research Purpose	Research Method	Conclusions
Lueg, Lueg, Andersen and Dancianu, 2016	Corporate Communications: An International Journal	To investigate the motivations of stakeholders in fostering the adoption of standards and guidelines for CSR after <IR> became mandatory in Denmark.	A case study at the Danish carpet manufacturer EGE. Interpretation of the case from the perspective of pragmatic constructivism, which focuses on the integration of four dimensions: facts, possibilities, values, and communication.	The family-owned EGE follows a strategy of "enlightened shareholder value", in which CSR is an essential value driver. This strategy fostered <IR> with guidelines and standards for CSR. The CSR practices appeared to be helpful for integrating measureable plans to the strategy and for controlling CSR implementation. However, the long and technical CSR reports did not effectively communicate EGE's values and possibilities. The authors outline how EGE overcame these barriers.
Macias and Farfan-Lievano, 2017	Meditari Accountancy Research	To evaluate the implementation of the <IR> framework in a group of Colombian enterprises.	A multiple-case study approach, focusing on six enterprises that use the <IR> framework. The sampled enterprises are Argos, EEB, EPM, ISA, Nutresa and Ocensa. Interviews of reporters and documentary analysis were performed.	The few Colombian firms that use the <IR> framework all have ambitious expansion goals in the medium term. The main reason for the adoption of the <IR> framework in these firms is that it facilitates access to resources from new foreign investors.

Having analysed the case studies, which focus on why and how entities may adopt <IR>, attention is now turned to studies, which focus on <IR> assurance.

4.7 Studies that focus on <IR> assurance

This category analyses those studies, which look at assurance in <IR>. The first study is by Briem and Wald (2018) who examined the companies' reasons for voluntarily obtaining third party <IR> assurance and the role of external auditors in the assurance process. They conducted 25 in-depth structured interviews and they analysed archive materials. The results show that companies follow coercive pressures from their stakeholders when obtaining external assurance. This finding confirms the inference by the researcher in section 2.10 that <IR> is more grounded in the stakeholder theory, as compared to the other theories discussed. The other result is that companies intend to appreciate their non-financial indicators and increase their credibility and reliability by having their IARs assured. Lastly, the results show that external auditors play a pivotal role as change agents for the implementation of <IR> assurance (Briem & Wald, 2018).

In a closely related study, Reimsbach, Hahn and Gürtürk (2018) investigated how the choice of reporting format interacts with the voluntary assurance of sustainability information. The authors conducted an online experiment and statistical analyses. The results show that professional investors value the crucial role played by assurance in the context of voluntary disclosure. Furthermore, Reimsbach et al. (2018) find that assurance of sustainability information positively affected professional investors' evaluation of a firm's sustainability performance, which resulted in a higher weighting of information and ultimately led to higher investment-related judgements. This assurance effect was however weaker in the case of <IR> compared to separate reporting. Reimsbach et al. (2018:559) suggest that this weaker assurance effect is a result of cognitive bias in decision making when assured financial performance and non-assured financial performance are presented in the same report.

In an earlier study, Maroun and Atkins (2015) examined the challenges to assuring IARs and offer initial ideas on how assurance models may develop to accommodate <IR>. The authors conducted 18 in-depth interviews with senior South African auditors

and assurance experts. They conclude that assurance of the IAR has the potential to add value by improving the report's credibility and assisting boards of directors in fulfilling their monitoring and review functions. There are a number of technical challenges, which make it impossible to assure the entire IAR as only certain parts of the IAR can be subjected to assurance. The authors are concerned about existing assurance practice, which results in different types of professional opinions being given on different elements of the IARs. This is likely to add to the "audit expectation gap" and it poses a risk that users will place undue reliance on engagement reports found or referred to in the IAR. Maroun and Atkins (2015) propose a process-based audit as a way forward but this was ultimately dismissed because systems and controls at many clients are not sufficient or adequately documented.

Maroun and Atkins (2015) further show that the absence of suitable criteria appears to be the most significant obstacle to assurance of the IAR. A short-term solution is to develop a set of guidelines that recommend those parts of the IAR that should be the subject of an assurance (Atkins & Maroun, 2015:05). It may be possible though to define an alternative assurance model, which does not express an opinion on the extent to which the IAR complies with the <IR> framework but instead provides something similar to a panel review by suitably qualified experts. There is, however, a risk that this new form of assurance will fail to command the same respect as the audit of financial statements and will simply expand or perpetuate the audit expectation gap (Atkins & Maroun, 2015:05).

Maroun (2017) addresses some of the concerns raised above (Atkins & Maroun, 2015). He goes beyond why companies voluntarily obtain third party assurance and why it is difficult to assure IARs. He developed an initial framework for the assurance of an IAR. Maroun (2017) conducted interviews with 20 audit experts and 20 preparers of IARs. The interviews were complemented by principles from existing professional assurance standards. Maroun (2017) developed three assurance models, which companies may consider implementing that are: the restricted model, the integrated approach to assurance and the Delphi-inspired model. The study is applauded for being one of the earliest studies to avail assurance models for non-financial data since most assurance models only apply to financial data.

In a follow up to the Maroun (2017) study, Maroun (2018) developed an alternate approach to assurance and identified the initial elements of that model. The study is exploratory in nature and relies on interviews with experienced South African auditors and preparers. The purpose and methodology of the study are similar to the Maroun (2017) study although the results are different. Maroun (2018) produced what he called the "interpretive assurance model" which is different to the model developed in the Maroun (2017) study where the restricted assurance model, integrated approach to assurance, and Delphi-inspired model were developed.

Assurance of non-financial items has a number of research opportunities because there are still a number of unanswered questions in the literature. However, the studies synthesised above are testimony that academics and professional organisations are advancing studies in this area of research. The studies consulted under the assurance category are summarised in Table 4.6 below.

Table 4.6: Summary Table for studies that focus on <IR> assurance

Authors	Journal	Research Purpose	Research Method	Conclusions
Briem and Wald, 2018	Accounting, Auditing & Accountability Journal	To examine companies' reasons for voluntarily obtaining third party <IR> assurance and the role of external auditors in the assurance process.	25 in-depth semi-structured interviews and analysis of archive materials	Companies follow coercive pressures from their stakeholders when obtaining external assurance. They intend to appreciate their non-financial indicators and increase their credibility and reliability. Auditors play an important role as change agents for the implementation of <IR> assurance
Maroun, 2017	The British Accounting Review	To develop an initial framework for the assurance of an IAR using detailed interviews with 20 assurance experts and 20 preparers.	Primary data collected from recorded interviews with 20 audit experts and 20 preparers, complemented by principles from existing professional assurance standards	Three possible assurance models: restricted assurance model, integrated approach to assurance and Delphi-inspired model
Maroun, 2018	Accounting, Auditing & Accountability Journal	To describe/ develop an alternate approach to assurance and identify the initial elements of that model.	Exploratory/interpretive – relying on detailed interviews with experienced auditors and preparers to develop an initial approach for providing some level of assurance over an IAR.	The research identifies elements of an interpretive assurance model, which focuses on providing assurance on the interpretation and analysis of information included in an IAR rather than on underlying data.

Table 4.6 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Maroun and Atkins, 2015	ACCA publication	To examine the challenges to assuring the reports and offer initial ideas of how assurance models may develop to accommodate <IR>.	18 in-depth interviews with senior South African auditors and assurance experts	Only certain parts of the IARs can currently be the subject of an assurance engagement. A key concern with existing assurance practice is that it results in different types of professional opinion being given on different "elements" of the IARs. Process-based audit was suggested as a possible way forward but this was dismissed because systems and controls at many clients are not sufficient. Absence of suitable criteria appears to be the most significant obstacle to assurance of the IAR. A short-term solution is to develop a set of guidelines, which recommend those parts of the IAR that should be the subject of an assurance. In the long run, it may be possible to define an alternative assurance model, which does not express an opinion on how the IAR complies with the <IR> framework but instead provides something similar to a panel review by suitably qualified experts. However, this new form of assurance might fail to command the same respect as the audit of financial statements and will simply expand the audit expectation gap.
Reimsbach, Hahn and Gürtürk, 2018	European Accounting Review	To investigate how the choice of reporting format interacts with the voluntary assurance of sustainability information.	Online experiment and statistical analyses	Professional investors underline the important role of assurance in the context of voluntary disclosure and illustrate the relevant interaction with the reporting format. Assurance of sustainability information positively affected professional investors' evaluation of a firm's sustainability performance, resulted in a higher weighting of this information, and led to higher investment-related judgments. However, this assurance effect was weaker in the case of <IR> compared to separate reporting.

Having spent some time on the studies, which focus on <IR> assurance, attention is now turned to those that measure the level of integrated reporting quality (IRQ).

4.8 Studies that measure the level of <IR> quality

This category is made up of studies, which investigated the adherence of entities to the <IR> framework when preparing their IARs. Other studies examine adherence to the <IR> framework in totality or only certain segments of the <IR> framework. This category relates to this study as it evaluates the quality of IARs as measured by the PAI, which was developed from the IIRC guidelines.

The first study to be presented is one by Maroun and Atkins (2018) who explored how extinction prevention is currently being disclosed in IARs as well as how an extinction accounting framework may be operationalised. They conducted interpretive text analysis of the IARs and sustainability reports for the JSE's 40 largest companies from 2011 to 2016. An extinction accounting framework together with some key performance indicators (KPIs) were developed from the extant literature. Maroun and Atkins (2018) then used the same framework and KPIs to measure and evaluate whether extinction accounting disclosures are made in the IARs. The results show that no companies dealt with the following extinction accounting disclosure themes:

- ❖ location and size of land owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas
- ❖ habitats protected or restored
- ❖ products and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas
- ❖ habitats protected or restored
- ❖ IUCN Red List species and national conservation list species (Maroun & Atkins, 2018:109).

This study is one of the earliest studies to evaluate how extinction accounting has been catered for in <IR>. The results show that the <IR> framework has to be improved so that it may fully embrace extinction accounting.

Menicucci (2018) investigated the effect of firms' characteristics on forward-looking disclosure information (FLI) within the ambit of <IR>. The study empirically assessed the extent with which FLI is provided for in IARs. The author developed a dichotomous disclosure index comprising 27 items, which is then used to perform manual content analysis in 282 IARs available in the IIRC website at the end of 2015. The disclosure index was developed from the list of content elements contained in the <IR> framework. Menicucci (2018) further proposes three hypotheses and eight models, which are tested within a multivariate regression analysis in order to explore the effects of three main variables on FLI. The three variables are firm size, profitability and leverage. Menicucci (2018) finds that companies are reluctant to provide FLI in IARs as evidenced by a low level of disclosure of an average of 5.006 words referring to FLI as compared to the 27 expected words. This number of words translates into an <IR> disclosure score of 18.54% (5.006/27 X 100). Furthermore, Menicucci (2018) shows that profitability and firm size have a statistically significant relationship with the level of disclosure for specific topics of FLI. Conversely, leverage is found to be statistically insignificant in explaining the extent of FLI.

While the study has contributed to FLI literature, two reservations are expressed. The first one relates to the use of a dichotomous index, which is binary in nature where a disclosure item is either present (denoted with a 1) or absent (denoted with a 0). The use of a dichotomous index does not capture the extent and depth of the quality of IARs. Secondly, the study could have considered more quantitative characteristics instead of looking at only three of them. Menicucci (2018) could have considered other factors like liquidity, ownership structure, company age, type of auditor, internationality, and industry membership.

The next closely related study is one by Rivera-Arrubla, Zorio-Grima and García-Benau (2017) who examined the new corporate reporting phenomenon of <IR> and assessed the information level provided and explored the determining factors. The study focuses on the guiding principles of connectivity and materiality, which are two content elements: the business model; and governance. Rivera-Arrubla et al. (2017) prepare a dichotomous index, which they use to measure the degree of integration through content analysis. Hypotheses are tested through statistical analysis. The results show that the <IR> disclosure levels by IIRC's pilot programme members reach

medium levels of disclosure. Furthermore, the findings reveal that the level of disclosure is significantly associated with the specific environment of organisations, assurance of the IAR and publication in the IIRC website. This finding from Rivera-Arrubla et al. (2017) confirms Menicucci's (2018) study that profitability and firm size have a statistically significant relationship with the level of specific topics of FLI. While the company specific characteristics studied in these two studies are slightly different, the fact remains that the level of disclosure has a statistically significant relationship with the firm specific characteristics.

Kılıç and Kuzey (2018) investigated the adherence level of IARs with the <IR> framework. The authors developed a dichotomous disclosure index, which has 50 disclosure items. This they use to perform manual content analysis for the IARs and stand-alone sustainability reports for 100 largest companies listed on the Turkish stock exchange (more formally known as Borsa Istanbul) as of 31 December 2015. To test these hypotheses, Kılıç and Kuzey (2018) performed multivariate ordinary least squares regression.

Overall, Kılıç and Kuzey (2018) find that companies on the Turkish stock exchange have an average <IR> disclosure score of 63%. Furthermore, the results show that the current company reports mainly disclose generic risks rather than company specific risks. Moreover, companies tend to provide positive information while dismissing negative information. Kılıç and Kuzey (2018) also show that companies present financial and non-financial initiatives separately. In addition, the results reveal that companies lack a strategic focus and include backward-looking information rather than forward-looking information. This finding confirms the 18.54% disclosure level found by Menicucci (2018) as discussed above. Companies still have a long way to go concerning forward-looking information. Lastly, Kılıç and Kuzey (2018) show that the <IR> disclosure score is significantly and positively associated with sustainability reporting, global reporting initiative adoption, sustainability index listing and the presence of a sustainability committee.

As argued above on the Menicucci (2018) study, this study by Kılıç and Kuzey (2018) is criticised for making use of the dichotomous disclosure index, which is binary in nature. The researcher posits that <IR> exists in a continuum and therefore capturing

its quality cannot be executed effectively by using a dichotomous disclosure index. Instead, a polychotomous accountability index, which is considered more effective in terms of capturing the quality and extent of disclosure, should be considered.

In a slightly unrelated study, Steenkamp (2018) develops guidelines, which are then used to measure what award-winning companies (The 2015 Ernst and Young Excellence in Integrated Reporting Awards) disclosed in their IARs about material issues and their materiality determination processes. The study intends to provide insights about how companies perceive materiality. Steenkamp (2018) uses thematic analysis in constructing the guidelines and conducts content analysis on the IARs for the 10 companies. The results show that material issues disclosed by most companies relate to employees, social and environmental issues, customers and sustainable performance. Furthermore, Steenkamp (2018) shows that all except one company applied the <IR> framework. Lastly, the materiality determination processes, material issues and companies' descriptions of materiality are diverse.

Du Toit, Van Zyl and Schütte (2017) report on the long-term effect of <IR> on the quality of information, which ultimately aids investors and stakeholders in their decision-making. They conducted a detailed content review of information that is disclosed by four JSE listed companies with high social and environmental impacts over a period of three years (2012–2014). The results show that there has been a distinct decrease in the amount of information provided in the IARs but, most importantly, there still exists significant uncertainty as to the amount of reporting that is required (Du Toit et al., 2017). The researcher also noted a continuous decrease in the number of pages over the years from 2013 to 2016 to an average of around 200 pages or less. The researcher expresses reservations in the measure of quality used in this study where mechanistic content analysis was conducted. Du Toit et al. (2017) assumed that an increase in the volume of disclosure items signifies a relative increase in the quality of disclosure. As argued in section 5.3.2.4, there is a possibility of an increase in the volume of disclosure without a corresponding increase in disclosure quality. As such, the researcher suggests a more realistic approach of qualitative content analysis where meaning and implications of text are interpreted without necessarily taking the change in the volume of disclosure to represent an improvement in quality of disclosure.

The next study to be considered is one by Garanina and Dumay (2017) who investigated the extent to which managers and owners disclose intellectual capital (IC) in initial public offering prospectuses. The study also examines the influence on post-issue stock performance based on the initial public offerings of technology companies listed on the National Association of Securities Dealers Automated Quotations (NASDAQ) from 2002 to 2013. Garanina and Dumay (2017) performed content analysis of the prospectuses in order to determine the extent of IC disclosure. Secondly, they performed regression analysis to determine the influence of IC disclosure in initial performance prospectuses on post-issue stock performance. They found that the initial public offering prospectuses contained significant amounts of IC disclosure. Furthermore, they found that technology companies disclosed more IC information after the global financial crisis. Lastly, the regression analysis results show that IC disclosure has a higher influence on post-stock performance after the global financial crisis than before (Garanina & Dumay, 2017).

A closely related study is one by Melloni (2015) who assessed the quality of Intellectual Capital Disclosure (ICD). The author performed a manual content analysis of all the 52 available reports on the IIRC website as at 31 May 2014. Ultimately, multivariate regression analysis was conducted in order to test whether the tone of disclosure is affected by companies' declining profitability, membership in environmental sensitive industries, size and level of intangibles. Melloni (2015) finds that the majority of ICD is focused on relational capital, with limited quantitative and forward-looking information. The forward-looking part confirms what Menicucci (2018) finds that companies do not show the forward-looking information clearly. Melloni (2015) also reveals that a positive tone of ICD is significantly associated with declining performance, bigger size and higher level of intangibles supporting the use of ICD as impression management strategy.

Rupley, Brown and Marshall (2017) provide a history of corporate social responsibility (CSR) and examine whether non-financial, economic, governance and social indicators, identified in prior literature as being of interest to retail investors, are disclosed in the pioneering US IARs. The authors conducted academic analysis and content analysis in order to document whether the indicators are present in the IARs. Rupley et al. (2017) find that IARs cover mainly economic indicators and social

performance indicators with little focus on governance indicators. Moreover, the results show that IARs do not provide information most highly desired by investors, namely, market share, executive compensation, and product safety (Rupley et al.*,* 2017). The use of a seven-point Likert response scale captures a broader scope of indicators.

The study by Silvestri, Veltri, Venturelli and Petruzzelli (2017) investigated the degree of accountability of <IR> disclosed by an Italian family company operating in the transformation and marketing of durum wheat. They adopted a case study approach and conducted content analysis and semi-structured interviews. The semi-structured interviews were conducted with the CEO, CFO, sustainability consultant and the preparers of the IAR. Furthermore, Silvestri et al. (2017) developed a framework, which measures the degree of accountability in three forms, namely, weak integration, medium integration, and strong integration. According to the framework, the results show a medium level of integration. Furthermore, concerning the business model, there is a weak level of integration and an increase in the engagement initiatives for stakeholders (Silvestri et al., 2017).

The researcher expresses a number of concerns about Silvestri et al.'s (2017) paper. Firstly, unlike other studies, the writing style adopted in the paper is difficult to follow. There is no flow in how they present their concepts. It appears that authors were expressing what they know about <IR> without following a particular sequence. The so-called "golden thread" seems missing in their approach, particularly when presenting their results, for example, on page 697, when summarising the results, Silvestri et al. (2017) wrote:

> As regards the business model, the interviews and the documentary analyses show a situation, which presents margins of improvement.

One would have expected Silvestri et al. (2017) to be clearer as to whether the level of integration under the business model was weak integration, medium integration or strong integration as per their framework.

Secondly, the framework lacks the metrics that define what weak integration or strong integration means. As such, it becomes relatively difficult to replicate Silvestri et al.'s

(2017) study due to the lack of clarity of their framework. Thirdly, the abstract is poorly constructed because the research purpose summarised therein does not reflect what the authors present in the main paper. Furthermore, the research findings summarised in the abstract do not reflect what the authors find in the study, but rather the findings show the originality or contribution instead.

Sofian and Dumitru (2017) analyse how the IARs issued by eight companies from the financial sector in Europe follow the guidance of the <IR> framework. They adopted a polychotomous index developed by Stent and Dowler (2015), which has scoring intervals of 0-1-2 although not in every subcategory. The index, which has a maximum possible score of 53, is used to perform content analysis. The results show an average (integrated reporting quality) IRQ score of 74%, with 53% as the lowest score while 87% is the highest score (Sofian & Dumitru, 2017). Using New Zealand data for four organisations, Stent and Dowler (2015) find an average IRQ score of 77%, with 70% as the lowest score while 87% is the highest score. This shows that the results from Sofian and Dumitru (2017), and Stent and Dowler (2015) are in the same range.

However, they are very different from the results by Zhou et al. (2016) who, using South African data, find an average IRQ score of 20%, with 0.64% as the lowest score while 58% is the highest score. Also using South African data, Haji and Anifowose (2016) find an average IRQ of 43.57% (2011), 47.32% (2012), and 50.16% (2013). The lowest IRQ scores are 12.82% (2011) and 15.38% for 2012 and 2013 respectively. Furthermore, the highest IRQ scores from Haji and Anifowose (2016) are 66.03% (2011), 69.87% for 2012, and 69.87% for 2013. These findings from Haji and Anifowose (2016) confirm the results from Zhou et al. (2016). The two studies (Haji & Anifowose, 2016 and Zhou et al., 2016) concur that JSE listed companies are improving in terms of the quality of <IR>.

The explanation for the differences in the IRQ levels is perhaps due to the differences in the number of companies examined. Sofian and Dumitru (2017) examined eight companies using 2016 data, and Stent and Dowler (2015) examined four organisations using 2011 data. At the same time, Zhou et al. (2016) and Haji and Anifowose (2016) examined 443 companies over a four-year period (2009–2012) and 246 companies over a three-year period (2011–2013) respectively. Overall, the

findings suggest that the current reporting processes lack the integration, oversight and attention to future uncertainties required by <IR>. This is a confirmation of what Menicucci (2018) finds in her study (as explained above) that companies are reluctant to provide forward-looking information in the IARs.

The next study to be analysed under this category is by Adams, Potter, Singh and York (2016) who examined the evolution of corporate reporting on social investment activities in the context of a global move toward <IR> approaches. They adopted a conceptual and content analysis approach to examine the reports of four multi-national corporations. The results show that the purpose and outcomes of social investments became more clearly articulated and associated with longer-term notions of progress, risk and strategy over the period under investigation (2009 to 2013). Results further reveal that reporting in GSK, Heineken and NAB transformed to disclose value creation stories, which are more human-centred. Adams et al. (2016) suggest that the stewardship theory, isopraxism and isomorphism offer explanatory power for the identified changes in reporting.[2]

Haji and Hossain (2016) examine how the adoption of <IR> has influenced organisational reporting. They examine how companies report and integrate multiple capitals in various organisational reporting channels. Haji and Hossain (2016) use a qualitative case study approach based on discourse analysis. The study examines various organisational reports including IARs, standalone sustainability reports, websites and other relevant online materials. The study uses South African data over a four-year period (2011–2014). Haji and Hossain (2016:415) draw impression management techniques, namely, rhetorical manipulation, thematic manipulation, selectivity, emphasis in visual presentation and performance comparisons to explain disclosure and integration of multiple capitals.

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[2] The stewardship theory holds that, if managers are left on their own, they will make decisions responsibly as stewards of the assets under their management. This is the opposite of the agency theory, while isopraxism refers to mirroring the actions of others.

Haji and Hossain (2016) reveal that companies are increasingly conforming to reporting language, which is contained in the <IR> guidelines. Furthermore, companies have started to recognise increases, decreases, or transformations in capitals. Haji and Hossain (2016) however caution that the disclosures tend to be generic rather than specific, and often lack substance but are framed in "synthetic charming" aimed at displaying adoption of <IR> practice. This finding endorses the results of Menicucci (2018) who finds that IARs, in many cases, have limited information concerning forward-looking information. The results also show that multiple capital disclosures are more for defending and promoting organisational reputation than highlighting how organisational actions or inactions impact multiple capitals (Haji & Hossain, 2016:415).

Setia, Abhayawansa, Joshi and Vu Huynh (2015) confirm the results of an increased disclosure in human, social and relational, natural and intellectual capital. They examine whether IARs, prepared in accordance with the King III Code of Corporate Governance, display the abilities of entities to create and sustain value. The study explains the behaviour of companies listed on the JSE when responding to the regulation to publish an IAR. Setia et al. (2015) use IARs of the top 25 JSE listed companies for the years 2009/2010 and 2011/2012. Content analysis is employed to evaluate the presence or absence of information on capitals. The change in the extent of disclosure of capitals is analysed using t-tests. As indicated above, the results show an overall increase in the extent of capital disclosures. In fact, Haji and Hossain (2016) confirm the findings by Setia et al. (2015) when they reveal that the increment in the disclosure levels of social and relational capital is statistically significantly greater than the increment in the disclosure of other capitals. Setia et al. (2015) infer that the JSE listed companies are adopting a legitimation strategy based on symbolic management when preparing IARs.

The next study to be scrutinised is by Ruiz-Lozano and Tirado-Valencia (2016) who investigated the level of attention accorded to the principles of <IR> in industrial companies that have adopted this initiative. The authors use content analysis, correlation analysis and exploratory cluster analysis. Their results show that the companies still have a long way to go in order to address the guiding principles, especially the principle of conciseness. The other finding is that the companies

analysed were not influenced by the environment relating to the level of attention given to the inclusion of this type of reporting (Ruiz-Lozano & Tirado-Valencia, 2016).

Haller and Van Staden (2014) contribute to discussions regarding the concept of <IR> to provide a proposal of an instrument that could help in the implementation of the <IR> in practice. They use the deductive normative research approach. Haller and Van Staden (2014) conclude that a structured presentation of the traditional measure of "value added" in the "value added statement" has the potential to serve as a practical and effective instrument for <IR>. They argue that the proposed value added statement not only meets the guiding principles of <IR> but also reports on the monetary effects of different kinds of capital included in <IR> and this complements and represents the concept of <IR> (Haller & Van Staden, 2014:1190).

The last article to be analysed under this category is by ACCA (2011). This is one of the earliest studies to attempt to measure <IR> by analysing disclosures in areas of non-financial performance by Australian Securities Exchange (ASX) companies. Content analyses and academic analyses are the methods implemented in this study. ACCA (2011) finds that the ASX 50 companies investigated are at varying levels of integration where the highest IRQ score is 83% while some companies' levels of integration are below 10%. Results further reveal that some companies have gaps in their approach to strategy while others perform poorly in demonstrating integrated risk management. Performance was found best in the areas of stakeholder management, and purpose and strategy, while measuring and managing performance are the poorest disclosed areas (ACCA, 2011).

The researcher has four reservations regarding some of these studies, particularly those of Sofian and Dumitru (2017) and Stent and Dowler (2015). The first reservation is that the disclosure index is based on the prototype framework developed by the IIRC in 2012, which was later amended into the "Consultation Draft", which was, once again, amended in the final <IR> framework. This challenge is overcome in this study by developing an accountability index, which is based on the actual <IR> framework. Secondly, the 0-1-2 measuring scale is considered inadequate, particularly for broader variables like governance, business model, risks and opportunities, strategy and resource allocation, performance, and basis of preparation and presentation, which

may need a broader measuring scale. This limitation has been overcome in this study by having a five point measuring scale, which caters for the broader constructs.

Thirdly, the disclosure indices, as they are, miss some important concepts, which are critical in the South African context, particularly transformation as guided by the Broad-Based Black Economic Empowerment (BBBEE) Act, Number 53 of 2003. Transformation is introduced in the accountability index prepared in this study. Lastly, the samples for some of the entities investigated are small and it is problematic to make an informed opinion about the quality of reporting from a relatively small sample. This therefore makes generalisation difficult. The studies analysed under this category are summarised below in Table 4.7.

Table 4.7: Summary Table for studies that measure the level of <IR> quality

Authors	Journal	Research Purpose	Research Method	Conclusions
ACCA, 2011	ACCA publication	To analyse disclosures on areas of non-financial performance by Australian Securities Exchange (ASX) companies.	Content analysis and academic analyses	The assessment found a great degree of variability. Some companies' reporting is 83% integrated, while others consider non-financial matters peripheral to their business.
Adams, Potter, Singh and York, 2016	The British Accounting Review	To examine the evolution of corporate reporting on social investment activities in the context of a global move toward <IR> approaches.	The paper adopts both a conceptual and content analysis approach to examining the reports of four multi-national corporations i.e. Heineken, Unilever, Glaxo Smith Kline (GSK), and the National Australia Bank (NAB).	Social investments became more clearly articulated and associated with longer-term notions of progress, risk and strategy over the period of our study (2009–2013). Further, reporting in GSK, Heineken and NAB transformed to telling more human-centred value creation stories. Authors argue that stewardship theory, isopraxism and isomorphism offer explanatory power for the identified changes in reporting.
Du Toit, Van Zyl and Schütte, 2017	Meditari Accountancy Research	To report on the long-term effect of <IR> on the quality of information.	Detailed content review of the information companies report on	There has been a distinct decrease in the amount of information provided in IARs but, more importantly, there still exists significant uncertainty as to the amount of reporting that is required.
Garanina and Dumay, 2017	Journal of Intellectual Capital	To investigate the extent to which managers and owners disclose IC in initial public offering (IPO) prospectuses. To examine the influence on post-issue stock performance based on the IPOs of technology companies listing on the NASDAQ from 2002 to 2013.	Content analysis of prospectuses to determine the extent of IC disclosure. Regression analysis to determine the influence of IC disclosure in IPO prospectuses on post-issue stock performance	Initial Public Offering prospectuses contain significant amounts of IC disclosure for the subsequent analysis. The authors find that, after the Global Financial Crisis, technology companies disclose more IC information. The econometric analysis also reveals that IC disclosure has a higher influence on post-issue stock performance after the GFC than before.

Table 4.7 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Haji and Anifowose, 2016	Sustainability Accounting, Management and Policy Journal	To examine the trend of <IR> practice following the introduction of an "apply or explain" <IR> requirement in South Africa. The authors examine whether the <IR> practice is ceremonial or substantive in the context of a soft regulatory environment.	Content analyses to examine the extent and quality of <IR> practice using an <IR> checklist developed based on normative understanding of existing <IR> guidelines.	The results show a significant increase in the extent and quality of <IR> practice. The findings also reveal significant improvements in individual IR categories such as connectivity of information, materiality determination process and reliability and completeness of the IARs. However, despite the increasing trend and evidence of both symbolic and substantive <IR> practice, the authors conclude that the current <IR> practice is largely ceremonial in nature, produced to acquire organisational legitimacy.
Haji and Hossain, 2016	Qualitative Research in Accounting & Management	To examine "how" the adoption of <IR> and the embedded multiple capitals framework, has influenced organisational reporting practice. To examine how companies report and integrate multiple capitals in various organisational reporting channels	Using a qualitative case study approach based on discourse analysis, this paper examines various organisational reports including IARs, standalone sustainability reports and IARs. The authors draw five impression management techniques. .	Companies are increasingly conforming to reporting language espoused in existing <IR> guidelines and multiple capital frameworks over time. Companies have also started to recognise that the capitals are subject to "increases, decreases, and transformations" over time. However, the disclosures are generic, rather than company-specific, and lack substance, often framed in synthetic charming aimed to showcase adoption of <IR>.
Haller and Van Staden, 2014	Accounting, Auditing & Accountability Journal	To contribute to the current discussions about the concept of <IR> and provide a practical and useful proposal of an instrument that could help to apply the <IR> concept in corporate practice	Deductive normative research approach	The paper argues that a structured presentation of the traditional measure of "value added" in a so-called "value added statement" (VAS) has the potential to serve as a practical and effective reporting instrument for <IR>. The proposed VAS not only meets the guiding principles of <IR> but also reports on the monetary effects of different types of capital included in <IR>.

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Table 4.7 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Maroun and Atkins, 2018	Accounting Forum	To explore how extinction prevention is currently being disclosed in IARs as well as to demonstrate how an extinction accounting framework may be operationalised	Interpretive text analysis of the companies' integrated and sustainability reports from 2011 to 2016	The paper proposes a framework to evaluate how extinction accounting is being disclosed in IARs. Some KPIs on extinction accounting have been developed. No single company dealt with each of the disclosure themes or elements listed in the framework developed by authors
Melloni, 2015	Journal of Intellectual Capital	To assess the quality of Intellectual Capital Disclosure offered in <IR>	Manual content analysis of all the reports available in the IIRC web site, and multivariate regression analysis	Majority of ICD is focused on relational capital, with limited quantitative and forward-looking information. Additionally, compared to non-ICD, ICD is more optimistic. The positive tone of ICD is significantly associated with declining performance, bigger size and higher level of intangibles supporting the use of ICD
Menicucci, 2018	Journal of Applied Accounting Research	To investigate the effect of firm characteristics on forward-looking disclosure (forward-looking information (FLI) within the context of <IR>. The study assesses the extent of FLI provided in IARs and empirically fills the research gap into the topics of FLI disclosed in the <IR>.	A manual content analysis to investigate the level and the topics of FLI in 282 IARs available in the IIRC website. A disclosure index consisting of 27 information items is developed from the <IR> framework. Three hypotheses are proposed and eight models are tested within a multivariate regression analysis in order to explore the effects of three main variables on FLI.	The study confirms that firms are reluctant to provide FLI in IARs. The results show that profitability and firm size have a statistically significant relationship with the level of specific topics of FLI. Conversely, leverage is found to be insignificant in explaining the extent of FLI

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Table 4.7 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Kılıç and Kuzey, 2018	Meditari Accountancy Research	To investigate the adherence level of current company reports to the <IR> framework. This study also aims to examine the impact of corporate sustainability characteristics on the adherence level of current company reports to the <IR> framework.	The authors constructed a disclosure index based on the content elements of the <IR> framework. They then measured the <IR> disclosure score of each company through a manual content analysis of its annual reports. To test the hypotheses, the authors performed a number of statistical analyses.	Company reports mainly present generic risks rather than company-specific; provide positive information while dismissing negative information; present financial and non-financial initiatives separately; lack a strategic focus; and include backward-looking information rather than forward-looking information. <IR> disclosure score is significantly and positively associated with sustainability reporting, GRI adoption, sustainability index listing and the presence of a sustainability committee.
Rivera-Arrubla, Zorio-Grima and García-Benau, 2017	Social Responsibility Journal	To look into the new corporate reporting phenomenon of <IR> to assess the information level provided, identify trends and explore its determining factors.	A disclosure index is proposed and measure level of integration of IARs. Hypothesis testing.	The disclosure levels of the IARs published by IIRC's pilot programme members reach medium levels of disclosure. The level of disclosure is significantly associated with the specific environment of organisations, assurance of the report and publication in the IIRC website.
Ruiz-Lozano and Tirado-Valencia, 2016	Revista de Contabilidad – Spanish Accounting Review	To understand the level of attention of the principles of <IR> in the industrial companies.	Content analysis, correlation analysis and exploratory cluster analysis	Companies still have a long way to go, especially in relation to the principle of "conciseness". The companies analysed were not influenced by the environment relating to the level of attention given to the incorporation of this type of reporting.
Rupley, Brown and Marshall, 2017	Research in Accounting Regulation	To provide a history of CSR and examine whether non-financial economic, governance and social indicators identified in prior literature as being of interest to retail investors are disclosed in the pioneering US IARs.	Content analysis and academic analysis	IARs cover predominately indicators of economic and social performance with little focus on governance. IARs examined do not, as a rule, provide the information most highly desired by investors (i.e. market share, executive compensation, and product safety)

Table 4.7 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Setia, Abhayawansa, Joshi and Vu Huynh, 2015	Sustainability Accounting, Management and Policy Journal	To examine whether the IARs prepared in accordance with the King III are showing abilities of organisations to create and sustain value. To explain the behaviour of companies listed on the JSE when responding to the regulation to publish an IAR	IARs of the top 25 JSE listed companies for the years 2009/2010 and 2011/2012 are content-analysed for the presence of information on capitals. The change in the extent of disclosure of capitals is analysed using t-tests	Introduction of <IR> in South Africa has resulted in an increase in the extent of disclosure of human, social and relational, natural and intellectual capital information of the listed companies. The increment in the disclosure of social and relational capital is statistically significantly greater than the increment in the disclosure of other capitals. The findings indicate that JSE-listed companies are adopting a legitimation strategy based on symbolic management when preparing IARs.
Silvestri, Veltri, Venturelli and Petruzzelli, 2017	Meditari Accountancy Research	To investigate the degree of accountability of <IR> disclosed by an Italian family firm operating in the transformation and marketing of durum wheat	Case study approach- Content analysis and semi-structured interviews with the CEO, CFO, sustainability consultant and the working group on <IR>	The paper enriches theoretical conceptualisation of the implementation of <IR> proposing a new conceptual model that adds empirical findings to the literature on <IR> and, at the same time, addresses the call for studies of Dumay et al. (2016) to engage more with practice and development on <IR>.
Sofian and Dumitru, 2017	Sustainability	To analyse how the IARs issued by companies from the financial sector in Europe are following the guidance of the <IR> framework	Content analysis using a disclosure checklist	The annual report of Generali scored the highest compliance level with the guidance of the <IR> framework, but each one of the companies stood out with respect to at least one of the guiding principles or fundamental concepts mentioned in the <IR> framework.
Steenkamp, 2018	Journal of Intellectual Capital	To develop guidelines of what companies leading <IR> practice disclose in their IARs about material issues To provide insight about their perception of materiality.	Content analysis to investigate what the top 10 South African companies disclosed in their 2014 and 2015 IARs regarding materiality. Thematic analyses were conducted in developing guidelines.	All except one company applied the <IR> framework. The materiality determination processes, material issues and companies' descriptions of materiality are diverse. Material issues most companies identified relate to employees, social and environmental issues, customers and sustainable performance.

Table 4.7 continued

Authors	Journal	Research Purpose	Research Method	Conclusions
Stent and Dowler, 2015	Meditari Accountancy Research	To provide early assessments of the changes for corporate reporting processes, which an emerging initiative like <IR> will require. The authors also consider the potential for these changes to contribute towards resolving major problems such as financial and environmental crises	The development of a reporting checklist based on the requirements for <IR>, which was used to assess the gap between current "best practice" reporting processes. They then propose systems thinking, a widely accepted approach to problem solving, as a theoretical basis for assessing the <IR> framework and for deeper consideration of the gap analysis.	The authors assess 2011 annual reports and related online reporting practices for four New Zealand "best practice reporting entities", using their reporting checklist. Although none of their sample entities published a full IAR for 2011, reporting scores range from 70 to 87 per cent. The findings suggest that current reporting processes lack the integration, oversight and due attention to future uncertainties required by <IR>. While this appears to be a relatively small gap, systems thinking principles indicate that these deficiencies may be critical to sustainability and financial stability, the stated aims of <IR>.
Zhou, Simnett and Green, 2016	Abacus	To investigate the benefits of <IR> to the capital market	Multivariate statistical analysis	Analysts' forecast errors and dispersion reduces as the level of alignment with the <IR> framework increases. Further, the improved alignment is associated with a subsequent reduction in the cost of equity capital for certain reporting companies. <IR> is providing incrementally useful information over existing reporting mechanisms to the capital market

4.9 Summary and conclusions

The chapter continued the analysis of related literature, which began in Chapter 3. The chapter begins by analysing the conceptual studies. This category of literature consists of studies, which did not perform any data collection but rather performed conceptual and academic analyses to this concept of <IR>, focusing on the different aspects of <IR>. Many studies in this category focus on defining what <IR> is, advantages and disadvantages of <IR>, origins of <IR>, content elements and guiding principles of <IR> and, in some cases, critique of <IR> and the IIRC. In total, 22 studies were analysed under this category.

The second category is that of empirical studies that investigate various constructs of <IR>. Some of the constructs include investigating a link between <IR> and integrated thinking, and investigating interrelationships, which influence the ability of companies to create value for stakeholders. Moreover, some studies investigated integrated thinking as a cultural control mechanism and how stakeholders interpret integrated thinking. Some studies investigated linkages between <IR> and the entities internal processes whereas some explored the challenges of integrated thinking by exploring challenges to preparing IARs. In addition, some performed analysis of how preparers' mode of cognition influences the patterns of accountability associated with <IR> and some evaluated the decision-usefulness of <IR> and the readability of IARs. Lastly, one carried out a Luhmannian analysis of <IR> while others evaluated whether implementation of <IR> principles advance control systems. In total, 29 studies were deliberated upon under this category.

The third category that was presented is that of <IR> in the not-for-profit entities. Two of the studies articulate the usability of <IR> in universities, and the third study presents arguments on the applicability of <IR> in the public sector. This category needs more research since it has relatively fewer studies.

The fourth category is that of economics-based archival studies. These studies are methodologically economics-based and mainly fall in the category of capital markets research. Some of the studies investigate the value relevance of accounting information under <IR> while others examine the economic consequences with IRQ.

Some studies also examine the impact of the Hofstede National Cultural System on <IR> whereas other studies examine the influence of institutional factors on IARs. There are studies that examine the association between <IR> and firm valuation and others that examine the factors associated with completeness and balance in <IR>. Lastly, some studies examine the association between <IR> disclosure quality and corporate governance mechanisms, while others examine the relation between <IR> and the composition of a firm's investor base. This category is fairly well attended to given that 14 studies were analysed.

The fifth category presented in the chapter is that of case studies, which focus on why and how entities may adopt <IR>. This is one of the shortest categories with only two studies analysed. The two case studies were conducted in Denmark and Colombia. The conclusion from the studies is that firms studied have ambitious goals in the medium term. Another finding is that firms follow a strategy of "enlightened shareholder value" where CSR is an essential value driver.

The sixth category with five studies was presented in the chapter and is about <IR> assurance. Assurance of IARs remains an issue without a conclusive approach. Some studies therefore developed an IAR assurance framework and another follow up study provides an alternate approach, which may be utilised to assure IARs. There are studies that examine the challenges, which are faced when attempting to assure IARs, while other studies investigate how the choice of reporting format interacts with voluntary assurance of sustainability information. While commendable work has been done on assurance of IARs, more work still needs to be done on this aspect.

The seventh category presented in the chapter is that of studies, which measure the level of <IR> quality. Some of the studies analyse the disclosure on areas of non-financial reporting by ASX companies while one reports on the long-term effects of <IR> on the quality of information. One study investigates the extent to which managers disclose intellectual capital in initial public offerings and another study examines the trend of <IR> following the introduction of <IR> in South Africa. There is a study that examines how the absorption of <IR> and the embedded multiple capitals framework has influenced organisational reporting practice, one that explores how extinction prevention is currently being disclosed in the IARs and one that assesses

the quality of intellectual capital disclosure offered in <IR>. Lastly, one study investigates the degree of accountability of <IR> disclosed by an Italian company, while another investigates the benefits of <IR> to the capital market. In total, 20 studies were analysed under this category that laid a foundation for the current study. While a number of studies exist, work still needs to be done in order to shed more light on how <IR> is implemented in different jurisdictions.

CHAPTER 5
RESEARCH METHODOLOGY

5.1 Introduction

Research methodology or research approach entails plans and procedures that span from broad assumptions to detailed methods of data collection, analysis and interpretation (Creswell, 2014). This chapter analyses the research design adopted in this study together with the rationale of selecting that paradigm. This study employs the mixed methods research design. Under the mixed methods research, the three basic mixed methods and the advanced mixed methods are presented.

The next subheading to be addressed is research methods. The style of presentation adopted is to analyse the research methods that address a particular research objective (research objectives as presented in section 1.4). Under Objective 1: "to develop an extensive weighted polychotomous accountability index to measure the extent and quality of <IR> disclosures by the JSE listed companies", the disclosure indices and the Delphi Inquiry are discussed.

Under Objective 2: "to investigate the feasibility and practicability of applying the accountability index to selected JSE listed companies over the period 2013 to 2016", content analysis, coding, <IR> quality, and the Kruskal-Wallis test are discussed.

Under Objective 3: "To investigate the factors that contribute towards a change in <IR> quality", interviews, triangulation, audio recording, qualitative data analysis are the methods and concepts, which are discussed. Research population and sampling are the concepts analysed next. Summary and conclusions of the chapter are the last elements to be presented in Chapter 5.

5.2 Research approach

Welman and Kruger (1999) theorise that the purpose of research is mainly threefold: to describe how things are, to explain why things are the way they are, and to predict phenomena. This study describes how things are and explains why they are that way by taking a mixed methods approach, which combines the quantitative and qualitative

approaches. Creswell (2014:32) defines mixed methods research:

> Mixed methods research is an approach to inquiry involving collecting both quantitative and qualitative data, integrating two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks. The core assumption of this form of inquiry is that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone.

The mixed methods approach includes the integrating method, synthesis method, qualitative and quantitative methods, multimethod and mixed methodology (Tashakkori & Teddlie, 2010). Johnson, Onwuegbuzie and Turner (2007:123) present a more general and all-encompassing definition of mixed methods research as the type of research in which the investigator or inquirer combines elements of qualitative and quantitative research for the purposes of breadth and depth of understanding and corroboration. This entails the use of qualitative and quantitative viewpoints in the collection of data, data analysis, integration of findings and inference techniques. A mixed methodological approach is not only about mixing methods, but rather it extends to philosophies. As presented by Johnson et al. (2007:119–121), the mixed methods approach has several characteristics:

➢ It involves the collection of both quantitative and qualitative data in response to questions or hypotheses.

➢ It includes the analysis of both forms of data.

➢ The procedures for collecting and analysing quantitative and qualitative data need to be rigorously conducted.

➢ The two forms of data are synthesised in the design analysis through merging data, connecting data, or embedding the data.

➢ These procedures are incorporated into a distinct mixed methods design that also includes the timing of the data collection as well as emphasis for each database.

➢ These procedures can also be informed by a paradigm or a theory.

Mixed methods research originated around the 1980s and 1990s and grew from

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diverse fields such as evaluation, education, management, sociology and health sciences (Creswell, 2014:266). Mixed methods went through several periods of development including the formative stage, the philosophical debates, the procedural developments, reflective positions, and expansion into different disciplines in many countries throughout the world.

Mixed methods employ research methodologies that do not share the same methodological weaknesses and methodological errors to increase the confidence in the results. In some cases, methodological errors are identifiable as errors and biases (Guthrie & Abeysekera, 2006:118). A mixed methods approach has the strength of drawing on both quantitative and qualitative research and minimising the limitations of both approaches. At a more practical level, a mixed methods approach provides a sophisticated approach to research that appeals to those on the forefront of new research procedures (Creswell, 2014:265).

5.2.1 Advantages of mixed methods

Mixed methods research is adopted in this study because it possesses several advantages over either qualitative or quantitative research. The first advantage for using mixed methods is that possibilities of triangulation are created. Greene, Caracelli and Graham (1989:256) define triangulation "as the designed use of multiple methods, with offsetting or counteracting biases, in investigations of the same phenomenon implemented independently". Triangulation brings about a number of benefits, which are identifiable as convergence, corroboration and correspondence of results from different methods studying the same phenomenon.

The second advantage is complementarity, which seeks elaboration, enhancement, illustration and clarification of the results from one method with the results from the other method. The third advantage is development, which seeks to use results from one method in order to develop or inform the other method. The fourth advantage is initiation, which seeks to discover paradoxes and contradictions that lead to an adjustment of the research questions or results. The last advantage is expansion, which seeks to extend the breadth and range of inquiry by using different methods for different inquiry components (Greene et al., 1989:05).

5.2.2 Typologies of mixed methods

There are two typologies of mixed methods designs, namely, the basic mixed method designs and the advanced mixed methods designs. Under the basic mixed method, there are three categories of designs, which are the convergent parallel mixed methods, the explanatory sequential mixed methods and the exploratory sequential mixed methods. Furthermore, there are also three categories of the advanced mixed method designs – the embedded mixed methods, the transformative mixed methods and the multiphase mixed methods (Creswell, 2014:270–272). The different types of mixed methods are summarised in Figures 5.1 and 5.2 below.

❖ **Basic mixed methods**

Figure 5.1 below shows the three different types of basic methods, namely, convergent parallel mixed methods, explanatory sequential mixed methods, and exploratory sequential mixed methods.

Convergent Parallel Mixed Methods

Quantitative Data Collection and Analysis (QUAN)

Qualitative Data Collection and Analysis (QUAL)

Compare or relate

Interpretation

Explanatory Sequential Mixed Methods

Quantitative Data Collection and Analysis (QUAN)

Follow up with

Qualitative Data Collection and Analysis (qual)

Interpretation

Exploratory Sequential Mixed Methods

Qualitative Data Collection and Analysis (QUAL)

Builds to

Quantitative Data Collection and Analysis (quan)

Interpretation

Figure 5.1: The three basic mixed methods
Source: Creswell (2014:269)

Since there are three categories of basic mixed methods, it is therefore necessary to specify the type of mixed methods adopted in this study. The first category is the convergent parallel mixed methods design. This design compares quantitative data collection and analysis to qualitative data collection and analysis leading to interpretation.

The second category is called the explanatory sequential mixed methods design. This approach is adopted in this study. This type of mixed methods research refers to an approach where the researcher first conducts quantitative research, performs an analysis of the results and then builds on the results to explain and interpret them in more detail with qualitative research. This research is considered explanatory in the sense that quantitative information is explained qualitatively (Creswell, 2014:274). The overall intention is to have qualitative data to explain quantitative results.

The third and last category is called the exploratory sequential mixed methods. This

is characterised by qualitative data collection and analysis, which builds up to quantitative data collection and analysis leading up to interpretation (Creswell, 2014:270–272). More attention was given to the second category, i.e., the explanatory sequential mixed methods, because this design informed this study. Under the explanatory sequential mixed methods approach, data is collected in two stages starting with rigorous non-probability sampling in the first stage (quantitative stage) and purposive sampling in the second stage (qualitative stage). This design places emphasis on qualitatively collecting and analysing data that builds directly on the quantitative results.

As pointed out by Creswell (2014:274), there are two challenges in this particular design. The first challenge relates to planning adequately on which quantitative results to follow up on and which participants to gather qualitative data from. This challenge is overcome by having qualitative data collection building directly on the quantitative results. The quantitative results were then built on extreme or outlier cases, significant predictors, significant results, relating variables, insignificant results, or even demographics.

The other challenge is whether the qualitative sample should be participants from the initial quantitative sample. The solution to this challenge is that they are the same individuals because the intent of the design is to follow up the quantitative results and explore the results in more depth. The aspect of explaining how the variables interact in more depth through the qualitative follow up is a key strength of this design (Creswell, 2014:274).

In terms of data analysis, quantitative data and qualitative data are analysed separately. Quantitative results then informed the plan into the qualitative follow-up research. Not only do the quantitative results inform the sampling procedure, but they can also identify the type of qualitative questions to ask participants in the qualitative phase. In the follow-up exercise, questions should be general and open-ended. When it comes to interpretation of results, the first phase (quantitative results) are presented followed by qualitative results from the second phase.

In the interpretation stage, a link on how qualitative results help to expand or explain

the quantitative results is presented. The researcher also has to establish the validity of scores from the quantitative measures and to discuss the validity and trustworthiness of the qualitative findings. Creswell (2014:274) cautions that overall accuracy of findings may be compromised if the researcher fails to consider and weigh all options available for following up on quantitative results.

Furthermore, results may be invalidated by drawing different samples for each phase of the study (between the quantitative phase and the qualitative phase). Lastly, there may be an inadequate sample size on either the quantitative part of the study or the qualitative part of the study. These setbacks are carefully considered and built into the planning process in order to produce a methodologically sound explanatory sequential mixed methods study.

❖ **The advanced mixed methods**

As outlined above, there are three categories of the advanced mixed methods, which are summarised in Figure 5.2 below. The three methods elaborated in Figure 5.2 are the embedded mixed methods, the transformative mixed methods and the multiphase mixed methods.

Figure 5.2: The advanced mixed methods
Source: Creswell (2014:270)

As illustrated in Figure 5.2, the embedded mixed methods design utilises one or more forms of data, which could be quantitative, qualitative or both but within a larger design (e.g., a narrative study, an ethnography or an experiment) (Creswell, 2014:277). The second type of the advanced mixed methods is the transformative mixed methods, which incorporates some elements of the convergent, explanatory sequential, or the exploratory sequential approaches within a social justice framework with the intention of helping a marginalised group. The key feature of this design is the use of a social

justice theory as a framework. Many elements of research, such as the research problem, research questions, data collection and analysis, interpretation, and the call for action, are usually framed by the social justice theoretical framework. The design is popular when studying marginalised groups, particularly in third world countries (Creswell, 2014:278).

The last under the advanced methods is the multiphase mixed methods in which the researcher conducts several mixed methods projects that may include mixed methods convergent or sequential approaches, or only quantitative or qualitative studies in a longitudinal study focusing on a common objective for the multiple projects. This type of design is commonly used in the programme evaluation or programme implementation stage, particularly where the multiple phases of the project stretch over a period. The projects may go back and forth between quantitative, qualitative, and mixed methods studies, but they build on each to address a common programme objective (Creswell, 2014:278). The advanced mixed methods are examined, not because they are chosen to inform this study, but they are discussed to demonstrate the available pool of designs from which the researcher could choose in order to inform this study. As elaborated above, this study is grounded in the explanatory sequential mixed methods approach.

This study (explanatory sequential mixed methods study) is analysed through two paradigms, namely positivism for the quantitative part of the study, and interpretivism for the qualitative part of the study. The positivism philosophy (worldview) entails that phenomena is external, objective and independent of social actors. Furthermore, the positivism philosophy is reductionist in nature whose focus is on theory verification and empirical observation and measurement (Saunders et al., 2009). On the other hand interpretivism entails phenomena which is socially constructed, subjective and may change due to having multiple realities and multiple participant meanings. Furthermore, interpretivism seeks understanding, theory generation and attempts at social and historical construction (Creswell, 2014).

The paradigm of positivism is informed by the researcher's ontology of objectivism which holds that quantitative data (which belongs to the positivist paradigm) is impartial and independent of researcher influence. This ontological inference

emanates from the researcher's epistemological stance that observable phenomena can provide credible data and facts (Saunders et al., 2009).

On the other hand, the paradigm of interpretivism is informed by the researcher's ontology of subjectivism which holds that qualitative data (which belongs to the interpretivist paradigm) is biased and dependent on researcher influence. This ontological inference emanates from the researcher's epistemological stance that phenomena has subjective meanings and focus is on the details of a situation and reality behind these details (Saunders et al., 2009). A remark has be made that the researcher is not self-contradictory by being ontologically and epestimelogically inclined towards both positivism and interpretivism, but this is reflection that phenomena and knowledge are dynamic (explainable from different perspectives) hence opting for the explanatory sequential mixed methods approach. Having spent time of the research approach and paradigms, attention will turned to the research methods adopted in this study and they are expounded below.

5.3 Research Methods

Data collection and analysis were done in three major steps as illustrated in Figure 5.3 below. Step number one is the construction of a weighted polychotomous accountability index using the Delphi Inquiry methodology. On this step, there is qualitative analysis of the <IR> framework and the development of a quantitative representation of the disclosure of the Guiding Principles and the Content Elements. This stage refers to the development of the weighted PAI.

The second step is analytic content analysis of the IARs whereupon IARs were benchmarked against the polychotomous accountability index. This step entails a quantitative analysis of both qualitative and quantitative data, which is contained in the IARs. Analysis at this stage is conducted using a form of manual coding called magnitude coding, which was explained in detail in the following sections. Coded data were presented according to JSE sectors and according to industries.

The industry data were further be tested using nonparametric statistics and, in particular, the Kruskal-Wallis test was performed using the Statistical Package for the Social Sciences (SPSS) version 25.

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The third stage is conducting interviews with companies, which have high quality IARs. Representatives from five companies were interviewed. At this stage, qualitative data, gathered through the interviews, were analysed qualitatively through manual coding utilising descriptive coding as a first cycle coding method, and ultimately using focused coding as a second cycle coding method (Saldaña, 2013). Coding was guided by the constructed PAI or disclosure index, and this construct is unpacked in the following sections.

The data collection procedures and analysis are summarised in Figure 5.3 below that shows the research stages with which the explanatory sequential mixed methods were executed. First is the development of the weighted polychotomous index using the Delphi Inquiry method. At this stage, the <IR> framework is presented quantitatively on the six-point ordinal scoring system. Secondly, IARs were downloaded and quantitatively and qualitatively analysed through content analysis. Lastly, interviews were conducted in order to establish the factors that contribute towards the improvement or decline in IRQ.

Figure 5.3: Data collection and analysis to be undertaken in this explanatory sequential mixed methods research
Source: Researcher

The style of presentation adopted is to present the research methods is to have the objective and the respective research method applied to achieve that particular objective. This is summarised in Figure 5.4 below. There are four objectives and each objective had at least one method presented next to it. The first objective is that of the development of the PAI, which was done through the Delphi Inquiry. The PAI was developed from the <IR> framework (see Appendix A1 and A2). Objective 2 is the testing of the PAI on IARs for some selected JSE listed companies. This was executed through content analysis. Objective 3 relates to the investigation of the factors that contribute towards a change in IRQ and this was achieved through semi-structured interviews. From content analysis and the semi-structured interviews, deductive inferences may be made on how to improve <IR> implementation.

EXPLANATORY SEQUENTIAL MIXED METHODS
(Quantitative data collection and analysis-Qualitative data collection and analysis-Intrepretation)

OBECTIVE ONE:
To develop an extensive weighted polychotomous accountability index to measure quality of the JSE listed companies' Integrated Annual Reports (IARs).

DELPHI INQUIRY

OBJECTIVE TWO:
To investigate the feasibility and practicability of applying the index to selected JSE listed companies over the period 2013 to 2016

CONTENT ANALYSIS
Magnitude coding, descriptive coding, focused coding

OBJECTIVE THREE:
To investigate the factors that contribute towards a change in <IR> quality

SEMI-STRUCTURED INTERVIEWS

OBJECTIVE FOUR:
To make suggestions and recommendations about <IR> by listed companies in the light of research findings

DEDUCTIVE INFERENCES
(As understood and interpreted by the author)

Figure 5.4: Research methods versus research objectives
Source: Researcher

Each objective was presented below together with the research methods that was used to achieve that objective. In other words, an objective was matched with all the research methods that were used to achieve that particular objective. Any relevant research concepts directly related to a particular objective was presented under that objective. The first to be addressed below is Objective 1 together with the relevant research methods and any other relevant research concepts.

5.3.1 Objective 1

To develop an extensive weighted polychotomous accountability index (PAI) to measure the quality of the JSE listed companies' Integrated Annual Reports.

In order to achieve this objective, there is a need to develop the PAI, which was then

used to measure the quality of IARs. As a result, disclosure indices, as a construct, was elaborated upon below. Secondly, the draft PAI was send to a team of experts who reviewed it, and recommended improvements to the PAI. The exercise was done through the Delphi Inquiry method, which will also be presented below.

5.3.1.1 Disclosure indices

A disclosure index may be defined as a research instrument, which is made up of pre-determined items, which, when scored, will provide a measure that reflects the disclosure level (Marston & Shrives, 1991). Coy (1995:121) proffers a slightly different definition of a disclosure index:

> A qualitative-based instrument designed to measure a series of items, which when scores for the items are aggregated, gives a surrogate score indicative of the level of disclosure in the specific context for which the index was devised.

A disclosure index may be weighted or unweighted. In a weighted index, some disclosure items are awarded higher scores based on their deemed importance. In an unweighted index, each disclosure item is considered equally important and therefore awarded a similar score when disclosed (Joseph & Taplin, 2011).

A disclosure index is considered reliable if another researcher can replicate the results. It is contended that, since the index is extracted from printed IARs, which arguably remain constant over time, there is no anticipated problem in replication (Marston & Shrives, 1991). Furthermore, a disclosure index is considered valid if it means what the researchers intended. Therefore, if the disclosure index has meaning as a measure of information disclosure, then it is considered valid. Disclosure indices may be divided into two categories, namely, the dichotomous disclosure index and the polychotomous accountability index. These are expounded below.

❖ **Dichotomous accountability index**

This index measures whether a company discloses a specific theme or not while sometimes also recording the disclosure volume. This is a simple binary coding scheme where merely the absence or presence of an item is recorded. Dichotomy, which is understood as the absence or presence of an attribute, is measured by a dichotomous accountability index. Each category is assigned a score of zero or one

regardless of how minimal or comprehensive its disclosure is (Coy & Dixon, 2004). This index is the one most suitable for quantitative content analyses.

Coy, Tower and Dixon (1993:122) advance three shortcomings of the dichotomous accountability index. Firstly, it fails to measure trend differences in terms of comprehensiveness and understandability of disclosures in IARs. That means that a dichotomous index fails to discriminate between poor and excellent disclosure of reported items. Secondly, it treats all individual disclosures as being equally important yet, in some cases, the disclosures are deemed different through the assignment of weights. Thirdly, it makes no allowance for possible imbalances in reports. Having presented the dichotomous accountability index, attention is now turned to the polychotomous accountability index.

❖ **Polychotomous accountability index**

This is a coding scheme, which incorporates ordinal measures in order to allow for the quality of a specific disclosure to be assessed (Beattie, McInnes & Fearnley, 2004:210). Unlike the dichotomous disclosure index, items of a polychotomous accountability index are measured by a finite range of values assigned to descriptive criteria established internally by index constructors in an effort to reflect varying levels of quality in how each index item appears across the reports they are studying (Coy & Dixon, 2004:82–83). The polychotomous accountability index therefore takes a matrix approach to narratives. This means that multiple dimensions are taken into account when analysing narratives and ultimately the resulting scale varies between zero and the number of attributes being investigated (Beck, Campbell & Shrives, 2010).

A weighted polychotomous accountability index was therefore developed and applied in this study (see section 6.2 and Appendix A1 and A2 for more detail). A number of stages were followed in developing the PAI.

❖ The first stage was to review the <IR> framework as promulgated by the IIRC in December 2013. The available literature on <IR> was also reviewed. This exercise identifies the key constructs, which have to be considered and included in the IARs. To generate the PAI constructs, focus is on the fundamental concepts, guiding principles, and content elements.

- ❖ The second stage is determining the objectives of the PAI. The objective of this study is to measure the extent and quality of IAR. Measuring quality does not entail merely identification of the presence or absence of a variable. Rather, the PAI evaluates the meaningfulness of a disclosure, thus going beyond the absence or presence of a variable.

- ❖ The third stage is identifying the appropriate constructs to be disclosed in the IAR. The generation of the relevant constructs (for PAI) is determined by the content elements and the guiding principles as presented in the <IR> framework.

- ❖ The fourth stage is preparing the draft PAI. This is crafted as informed by the review of the <IR> framework and <IR> literature. The stage entails identifying the necessary constructs and allocating the weights as per the sub-definition of different constructs.

- ❖ The fifth stage is for obtaining suggestions, recommendations and ultimately validation of the PAI by a panel of experts through the Delphi Inquiry method. The draft PAI was send to the experts for their input, particularly on the reasonableness of the different constructs and sub-constructs. Furthermore, input was expected regarding any omissions that may have taken place on the draft PAI. The experts also give input on the adequacy of the variables. Lastly, input was expected on the adequacy or inadequacy of the scores allocated per variable.

- ❖ The last and sixth stage is the finalisation of the PAI, and eventually testing its feasibility and practicability. The suggestions and recommendations made by the experts were factored into the draft PAI. Thereafter, it can be tested whether it can be used practically in the measurement and evaluation of the extent and quality of IARs.

Since there are more disclosure items for some categories of information than others, the framework implicitly weights information categories differently (Singleton & Globerman, 2002:99). It was proposed that the weighted polychotomous accountability index have a six-point ordinal scoring system from "0" up to "5". This is explained in Figure 5.5 below.

Disclosure level	Explanation
0	No disclosure at all
1	Undetailed disclosure (pure narrative)
2	Detailed disclosure (pure narrative)
3	Narrative and quantitative disclosures
4	Narrative, quantitative and comparative disclosures
5	One each up to a maximum of 5

Figure 5.5: Polychotomous accountability index
Source: Researcher

The use of a disclosure index is consistent with previous studies and may be traced back to Cerf (1961). Thereafter, several studies began to use a disclosure index as a research instrument. These include Singhvi and Desai (1971), Firth (1979), Chow and Wong-Boren (1987), Cooke (1989), Unerman and Bennett (2004), Campbell, Moore and Shrives (2006), Van Staden and Hooks (2007), Beck et al. (2010), and Joseph and Taplin (2011).

No specific number of items in the index has been prescribed in the literature since it varies from 17 to 224 (Marston & Shrives, 1991) but an existing index from the literature may be employed, if it is appropriate. In a survey conducted by Marston and Shrives (1991), they found that authors tend to start afresh with a new index while drawing on the experience of previous studies. Therefore, in this study, a new polychotomous accountability index was developed and tested through content analysis on 400 Integrated Annual Reports from JSE listed companies. After constructing the PAI draft (as explained above), it was send for review to a team of experts via the Delphi Inquiry method. The Delphi Inquiry is intended to bring content into the document by minimising researcher bias. The Delphi Inquiry method is explained below.

5.3.1.2 Delphi Inquiry

Dalkey and his associates at Rand Corporation originally developed the Delphi Technique in the 1950s and named it after the ancient Greek temple where the oracle could be found (Grisham, 2009). It is a method whose main aim is to obtain the most reliable consensus of opinion from a group of experts by making use of questionnaires with controlled feedback (Mitchell, 1991). Jones and Matthew (2000) define Delphi Inquiry as "a unique method of eliciting and refining group judgment based on the rationale that a group of experts is better than one expert when exact knowledge is not available". So, a Delphi panel of experts participate in a successive questionnaire survey where questions are redeveloped through addition or subtraction of information received from the previous responses.

Expert opinion literature identifies a number of opinion-capture techniques. These techniques are identified as genius (single individual) forecasting, survey (polling) forecasting, panel (face-to-face interaction) forecasting, and Delphi (without face-to-face interaction) forecasting (Mitchell, 1991). Apart from statistical aggregation superiority, the Delphi Technique has other practical advantages over other opinion-capture techniques. It can be used when it is impractical to have a face-to-face discussion; it overcomes time constraints and cost constraints, which may impede experts from meeting at a single place at the same time; it achieves consensus in a given area of uncertainty or an area, which lacks empirical evidence; and it minimises "status incongruity" (Powell, 2003). Furthermore, the panel is made up of experts from different backgrounds and this brings about the richness of contributions born out of diversity.

There is no stipulated number of experts to form the panel, though the recommendation is eight to ten members since it has been found that the average group error drops rapidly as the number in the Delphi is increased to about eight to twelve. After reaching about thirteen to fifteen members, the average group error decreases very little with each additional member (Johnson, 1976). Therefore, it was proposed to have five panels each comprising five to seven experts. The selection of experts is critical in the Delphi process and participants were selected based on interest characterised by publication(s) and/or higher degrees in the topic. Since the

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Real-Time Delphi was employed in this study, there was only to be one round and no explicit second round was necessary as in a conventional Delphi. Real-Time Delphi allows participants to revisit the study and they can make adjustments based on the new average or median of the group (Okoli and Pawlowski, 2004). Real Time Delphi enables respondents to give their feedback immediately and they can confirm or reassess their position promptly, thus rendering iterations irrelevant (Worrel, Di Gangi & Bush, 2013).

The method called "conclusion statements", proposed by Okoli and Pawlowski (2004), was employed in executing the Delphi Inquiry. Under this method, participants are presented with pre-defined statements for consideration. The main advantage of this method is that participants cannot omit important information, which would happen if open-ended questions were used in the first round. The panellists were presented with the draft PAI and they are required to validate it after making comments, suggestions, and recommendations. The recommendations particularly focused on any omissions; adequacy of variables; adequacy or inadequacy of scores allocated per variable (weights); and the reasonableness of constructs and sub-constructs. Research was strengthened by inviting participants to suggest further items for the index. Once consensus was reached, the results were analysed and incorporated into the final disclosure index.

Delphi-Inquiry panel selection

The panellists are people who are experts in corporate reporting and <IR> in particular. Experts are people who are professionally trained and experienced in their field who possess complex knowledge and insights, and are conversant with the latest developments in the areas of their expertise (*Oxford Advanced Learner's Dictionary*, 2010, sv 'expert'). They were asked to consider the draft PAI regarding any omissions, adequacy of variables, adequacy or inadequacy of scores allocated per variable, and to evaluate the reasonableness of constructs and sub-constructs. The final requirement was to validate the PAI after the incorporation of their input (Okoli & Pawlowski, 2004). A number of selection criteria guided the researcher in the selection of the Delphi Inquiry panellists and are enunciated below.

- ❖ Stated interest by a potential member, characterised by publications and/or contribution to the authorship of the <IR> framework and,

- ❖ Possession of a higher degree in the area and,

- ❖ Supervision of students undertaking a higher degree in the area or,

- ❖ Having received a research grant from international organisations like CIMA or ACCA in order to pursue research in the area and,

- ❖ Members of the IIRC, particularly the <IR> framework panel members and,

- ❖ Being a member of an auditing professional body like IRBA (South Africa), SAICA (South Africa), AAC (Canada), ACCA (the UK), or CPA (the US & Australia) or,

- ❖ Being employed as a preparer of IARs by a listed company or,

- ❖ Possessing considerable experience in the area but not necessarily possessing a qualification in that particular area.

Composition of the Delphi Inquiry panels

In implementing the panel member selection criteria presented above, five panels of five members each were established. In total, 25 members agreed to participate in the Delphi Inquiry exercise. Of these, three are <IR> framework panel members of the IIRC, six are auditors, seven are preparers of IARs and nine are academics. These were allocated into the five panels and the distribution is presented in Table 5.6 below.

All members were contacted via email using the "invitation to participate in an academic research study" letter (Appendix B). After confirming their willingness to participate in the study, they were given access to the Delphi Interview where they made comments in real-time. They could make as many changes as per their opinions. The Delphi panellists could also adjust their comments depending on the feedback from the panellists.

Group 1	Group 2	Group 3	Group 4	Group 5
2 academics	2 academics	2 academics	2 academics	1 academic
2 preparers	1 preparer	1 preparer	1 preparer	2 preparers
1 auditor	2 auditors	1 auditor	1 auditor	1 auditor
0	0	1 IIRC member	1 IIRC member	1 IIRC member
5	5	5	5	5

Figure 5.6: Composition of the Delphi Inquiry panels
Source: Researcher

It is contended that the use of the Delphi Inquiry technique improves the reliability and validity of the disclosure index since the PAI received validation from the experts. Use of the Delphi Inquiry technique is consistent with previous studies, which include the work of Johnson (1976), Dinius and Rogow (1988), Mitchell (1991), Grisham (2009), and Schneider and Samkin (2008). Ultimately, a reliable disclosure index makes it feasible for replication. Once the PAI is finalised, then it was used to achieve Objective 2 through content analysis, which were discussed below.

5.3.2 Objective 2

To investigate the feasibility and practicability of applying the PAI to JSE listed companies over the period 2013 to 2016

After incorporating suggestions and recommendations from the Delphi Inquiry, the PAI was tested in terms of its feasibility and practicability. Through content analysis, IRQ for 400 IARs were measured through coding. Therefore, content analysis method and coding is elucidated below.

5.3.2.1 Content analysis

It is not surprising that multiple definitions of content analysis exist, mainly as a reflection of its historical development. However, in this study, content analysis is defined as the intellectual process of categorising qualitative and quantitative data into pre-determined clusters or conceptual categories in order to derive patterns and meaning in the presentation and reporting of information (Julien, 2008). Krippendorff (2004) offers an all-encompassing definition of content analysis as a "research

technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use". The aim of content analysis is to quantify the extent of disclosure in texts such as IARs or websites with numerical values that can be analysed statistically (Joseph & Taplin, 2011). The key assumption underlying content analysis is that larger numerical values signify higher levels of disclosure and also that the quantity of disclosure resembles the importance of an item being disclosed (Unerman, 2000). Content analysis proffers different kinds of inferences that are expanded on below.

5.3.2.2 Inferences under content analysis

Content analysis is inferential in nature. This means content analytic inferences may be hidden in the human process of coding. The content analytic inferences may be built into analytical procedures like dictionaries, in computer-aided text analyses or well-established indices (Krippendorff, 2004:36). In other cases, especially after statistical procedures have been applied, inferences appear in the analyst's interpretations of statistical findings. Content analysis produces neither deductive inferences nor inductive inferences, but rather abductive inferences (Krippendorff, 2004:36).

Deductive inferences proceed from generalisations to particulars. They are logically conclusive and implied in nature. Inductive inferences proceed from particulars to generalisations. The inference is not logically conclusive, but has a certain probability of truth. An example is of statistical generalisations proceeding from smaller samples to larger populations. The practice of measuring the statistical significance of scientific hypotheses particularly involves inductive inferences (Krippendorff, 2004:36). Central to content analysis are abductive inferences that proceed across logically distinct domains, from particulars of one kind to particulars of another kind. Abductive inferences are of interest to content analysis in that they proceed from texts to become answers to the analyst's questions. Such inferences are presented with a certain probability, though the probability may be strengthened by taking other contributory variables into effect (Krippendorff, 2004). Having presented the inferences under content analysis, the origins and development of content analysis is traced below.

5.3.2.3 Evolution of content analysis

Krippendorff (2004:03) presents a detailed account of the stages through which content analysis developed to become what it is today. The first stage is the late 1600s when the Church found the printing of non-religious materials to be a threat to its authority. The Church became concerned about the spread of non-religious material, and so started analysing the content of the newspapers in order to deal with it in moralising terms.

The second stage is when quantitative studies of the press were conducted. The first well-documented quantitative analysis of printed material occurred in the 18[th] century in Sweden when a publication of 90 hymns of unknown authorship appeared. The hymns were labelled as "contagious" and were accused of aiding dissenting groups to undermine the orthodox clergy of the Swedish state church. There was debate among scholars of good reputation as to whether the songs harboured any dangerous ideas. The debate centred on whether meanings of the religious symbols should be interpreted literally or metaphorically. This debate generated many ideas that have since been adopted now as part of content analysis and stimulated debate about methodology that continues today (Krippendorff, 2004:04)

The third stage relates to the propaganda analysis during World War II. Before the war, content analysis was used to identify propagandists who were individuals who attempted to influence others through devious means. In the 1940s, content analysis was employed mainly to extract information from propaganda. Furthermore, content analysis availed military and political intelligence, which were required to understand and predict events within Nazi Germany and the axis countries, and to estimate the effects of allied military actions on the mood of enemy populations. Alexander L. George described and compared the methods used during the war by the American content analysts in his book *Propaganda Analysis* (1959). The book made major contributions to the conceptualisation of the aims and processes of content analysis (Krippendorff, 2004:09).

The fourth stage is when the method was used in the social scientific study of political symbols, historical documents, anthropological data, and psychotherapeutic exchanges. Other than the discipline of communication, the use of content analysis,

after World War II, spread to other disciplines that include history where political symbols in French, German, British, Russian, and US elite press editorials and key policy speeches were analysed in order to test the hypothesis that a steady revolution had been in progress for some time (Lasswell, Lerner & Pool, 1952).

The other disciplines include sociology where Gerbner, Gross, Signorielli, Morgan, and Jackson-Beeck (1979) proposed the development of cultural indicators by analysing, for almost two decades, one week of fictional television programming per year in order to establish violence profiles for different networks. In psychology, content analysis began to be used in the inference of motivational, mental or personality characteristics through the analysis of verbal records. In anthropology, anthropologists began using content analysis in the study of myths, folktales and riddles. Ethnography, which is critical under content analysis, emerged from anthropology (Krippendorff, 2004:12).

In 1955, a conference sponsored by the Social Science Research Council's Committee on Linguistics and Psychology brought together researchers from psychology, political science, literature, history, anthropology and linguistics. Contributions from the conference were published in a volume called *Trends in Content Analysis 1959.* The conference made two improvements to content analysis. Firstly, the shift from analysing content of communications to drawing of inferences about conditions of communication. Secondly, a shift from measuring volumes of subject matter to the counting of frequencies of symbols (Krippendorff, 2004:12).

The fifth stage is computer text analysis and the new media. The late 1950s saw the emergence of computer languages suitable for data processing. Journals also began to devote attention to computer applications in psychology. The development of software for literal data processing stimulated new areas of exploration, such as computational stylistics and computer-aided content analysis. Krippendorff (2004:12) further notes that it is believed that Sebeok and Zeps (1958) reported the first computer-aided content analysis where 4000 Cheremis folktales were analysed. In 1974, the development of suitable algorithms for computer content analysis took place at a workshop on Content Analysis in the Social Sciences held in Pisa, Italy. Since then, computational approaches have grown with some recent developments of software designed for computer-aided qualitative text analysis, with NVivo and Atlas.ti

as notable examples (Krippendorff, 2004:15).

The last stage is the qualitative challenge to content analysis. In response to the quantitative newspaper analysis elucidated above, a variety of research approaches, which explore texts systematically, emerged that call themselves qualitative. Notable examples include discourse analysis, which is described as a cluster of related methods for studying language use and its role in social life (Potter, 2008). The other is social constructivist analyses, which, by definition, refers to a tradition of scholarship that traces the origin of knowledge to processes generated in the individual mind and within human relationships (Gergen & Gergen, 2008).

Rhetorical analysis is understood as a method where the focus is on how messages are delivered and with what effects. In this method, researchers rely on the identification of structural elements, tropes, speech acts and styles of argumentation (Krippendorff, 2004:16). Ethnographic content analysis refers to an integrated method, procedure, and technique for locating, identifying, retrieving, and analysing documents for their relevance, significance and meaning. Emphasis is placed on discovery and description of contexts, underlying meanings, patterns, and processes rather than mere quantity or numerical relationships between two or more variables (Altheide, 2008).

Conversation analysis is where the researcher starts with the recording of verbal interactions in natural settings and aims at analysing the transcripts as records of conversation moves toward a collaborative construction of conversations (Krippendorff, 2004). Researchers in conversational analysis work on audio recordings or video recordings of interactions that occur naturally, meaning that they are not arranged or provoked by the researcher as in experiments or interviews. In principle and often in practice, there are no further requirements or limitations other than merely a conversation occurring in a natural setting (Krippendorff, 2004). The ultimate intention is to try to understand what the interactants are doing organisationally. Having traced the origins of content analysis, attention is turned to the typologies of content analysis.

5.3.2.4 Typologies of content analysis

Krippendorff (2004:16) questions the validity and usefulness of the distinction between quantitative and qualitative content analysis because all reading of text is qualitative even when certain characteristics of text are later converted into numbers. He further argues that the quantitative/qualitative distinction is a mistaken dichotomy because, in the first place, all text is always qualitative and therefore using numbers instead of verbal categories or counting instead of listing quotes is merely convenient and not necessarily a requirement for obtaining valid answers to a research question (Krippendorff, 2004:87).

Proponents of quantification have been criticised for restricting content analysis to numerical counting exercises and for uncritically accepting the measurement theories of the natural sciences (Dumay & Cai, 2015). On the other hand, proponents of qualitative content analysis have been criticised for being unsystematic in their use of texts and for being impressionistic in their interpretations. The argument is that no approach is better than the other (Beck et al., 2010; Krippendorff, 2004).

Qualitative researchers draw differences between qualitative and quantitative content analysis. They argue that each body of text is unique, affords multiple interpretations, and needs to be treated accordingly. Krippendorff (2004) maintains that there is no need to define content analysis as either quantitative or qualitative. Krippendorff (2004:87) observes that proponents from both approaches sample text, in the sense of selecting what is relevant. They unitise text by distinguishing words or propositions and using quotes or examples (Dumay & Cai, 2015). They contextualise what they are reading in light of what they know about the circumstances surrounding the texts. Lastly, both quantitative and qualitative proponents have specific research questions in mind. Krippendorff (2004) is argues that there is no validity and usefulness of the distinction between quantitative content analysis and qualitative content analysis because they share more similarities than differences.

While Krippendorff (2004) argues for the non-distinction of the different approaches under content analysis, two points presented below advocate for the distinction between quantitative and qualitative content analysis. Firstly, as indicated above, the origin of content analysis was quantitative in the 17th century and qualitative content

analysis only appeared in the 20ᵗʰ century. Secondly, as was demonstrated below, extant literature has accepted that quantitative content analysis exists alongside qualitative content analysis and therefore there is a tendency to be more quantitative when answering the "what" questions, and more qualitative when answering the "why" questions. As such, the distinctions are upheld in this thesis since they are considered pragmatic and realistic (Beck et al., 2010).

Content analysis may be either quantitative or qualitative in nature as quantitative content analysis addresses the "what" questions while qualitative content analysis answers the "why" questions and analyses perceptions (Julien, 2008:120). Beck et al. (2010) agree that content analysis is described in two broad categories: the mechanistic approach (quantitative) and the interpretative (qualitative) approach, which are elucidated below.

❖ **Quantitative content analysis**

Quantitative content analysis, also called mechanistic content analysis, provides information about disclosure volumes and/or frequencies and draws associations between different variables that might influence the disclosure behaviour (Beck et al., 2010). Quantitative content analysis involves the routine counting of words or concrete references, character counts, sentence counts, page proportions, frequency of disclosure, and proportion of volume of disclosure to total disclosure (Unerman, 2000). This approach captures and describes a surrogate assumed to convey meaning and report intent. Quantitative content analysis is "form oriented" (Smith & Taffler, 2000). This means that the focus is on volumetric or frequency capture and semiotic assumptions tend to be applied (Beck et al., 2010). Semiotic assumptions deem that the volume of disclosure signifies the relative importance of those disclosures to the discloser (Unerman, 2000:667).

The studies that benchmark narratives against a predetermined reporting framework including studies measuring the level of compliance with guidelines such as GRI frameworks or the <IR> framework (Beck et al., 2010) fall into this category. The mechanistic approach makes use of a dichotomous categorical index where each component disclosure item is given a score of "1" if the item appears in the IAR, disregarding the comprehensiveness and variations in the quality of individual

disclosures, and a score of "0" if the component disclosure item does not appear in the IAR (Coy & Dixon, 2004). The coding result was then be converted into a numerical frequency score, which represents the completeness of the information disclosed against the particular guideline in question.

There are a number of limitations to quantitative content analysis. One of them is that the use of an aggregated final score can conceal and obfuscate any differences in the diversity and quality of content used (Beattie et al., 2004). Secondly, there is a tendency to focus more on the form of measurement rather than the more ambitious challenge of coding for meaning. This can be interpreted to mean that quantitative content analysis captures the disclosure volume yet ignores the disclosure practice (Beck et al., 2010). Counting data items is not a satisfactory method because there are repetitions of certain words and numbers in IARs (Marston & Shrives, 1991). Moreover, numbers cannot be viewed in isolation as having any informational content; there is a need for accompanying explanatory words (Marston & Shrives, 1991). Focus is now turned to qualitative content analysis.

❖ **Qualitative content analysis**

The second category is the qualitative content analysis, which is also referred to as interpretative content analysis. Under this method, meaning and implications of text are interpreted through close reading (Julien, 2008). Qualitative content analysis is more "meaning oriented" and focuses on the underlying themes in the texts under investigation. "Meaning orientation" has a greater interpretative element than in the mechanistic assumptions of form orientation (Smith & Taffler, 2000:627). Qualitative content analysts recognise that text is open to subjective interpretation in order to reflect multiple meanings.

The major aim of this approach is to gain a deeper understanding of what is communicated and how it is communicated by disaggregating narratives into integral parts then describing the contents of each disaggregated segment. Focus is on quality, richness or qualitative character of the narratives and on the interpretation of text rather than an attempt to capture the mechanics of its disclosure. This category interprets how meaning is understood rather than attempting to record the mechanics with which text is conveyed (Beck et al., 2010). Joseph and Taplin (2011) concur when

they posit that some studies in the literature tend to reward some types of disclosures more than others in an attempt to recognise quality in the disclosures.

Under qualitative content analysis, categories or clusters of data identified may represent discrete instances. This means phenomena are apparent or not. Julien (2008) asserts that qualitative content analysis may be represented by degrees of attributes like direction and intensity, or qualities, such as <IR> reporting and disclosure is evident to some degree rather than simply present or absent.

Depending on the purpose of analysis, the quantitative and qualitative approaches may be combined in a single study (Julien, 2008). This study therefore goes beyond capturing only the quantity or volume of disclosure by also capturing the quality of disclosure as denoted by diversity, understandability, comprehensiveness and informativeness of disclosures (Coy & Dixon, 2004). Both qualitative content analysis and quantitative content analysis are utilised in this study.

5.3.2.5 Characteristics of quantitative and qualitative content analysis

The characteristics of quantitative and qualitative content analysis are juxtaposed in Table 5.1 below. The characteristics are anchored on different themes, namely, research approach, research tradition/orientation, objective, data nature, data section, categorisation schema, argument basis for proof, and use of computers. This means that the characteristics of quantitative content analysis and qualitative content analysis are compared and contrasted to one another.

Table 5.1: Characteristics of quantitative and qualitative content analysis

Category	Quantitative	Qualitative
Research approach	Deductive; based on previous research, which allows for formulating hypotheses about relationships among variables	Inductive; research questions guide data gathering and analysis but potential themes and other questions may arise from careful reading of data
Research tradition or orientation	Positivist	Naturalist or humanist, hermeneutics
Objective	To make "replicable and valid inferences from texts … to the contexts of their use" (Krippendorff, 2004:19)	"To capture the meanings, emphasis, and themes of messages and to understand the organisation and process of how they are presented" (Altheide, 1996:33); "Search for multiple interpretations by considering diverse voices (readers), alternative perspectives (from different ideological positions), oppositional readings (critiques), or varied uses of the texts examined (by different groups)" (Krippendorff, 2004:88)
Data: Nature	Syntactic, semantic, or pragmatic categories; naturally occurring texts or text generated from project	Syntactic, semantic, or pragmatic categories; naturally occurring texts or text generated for project.
Data: Selection	Systematic, preferably random, sampling to allow for generalisation to broader population; data selection usually complete prior to coding.	Purposive sampling to allow for identifying complete, accurate answers to research questions and presenting the big picture; selection of data may continue throughout the project.
Categorisation schema	Coding scheme developed a priori in accord with testing hypotheses; if adjustments are made during coding, items already coded must be recoded with the revised scheme; may use coding scheme(s) from other studies	Coding scheme usually developed in the process of close, iterative reading to identify significant concepts and patterns

Table 5.1 continued

Category	Quantitative	Qualitative
Coding	Objective; tests for reliability and validity	Subjective; in some cases, use of memos to document perceptions and formulations; techniques for increasing credibility, transferability, dependability, and confirmability of findings
Argument basis for proof	Frequency, indicating existence, intensity, and relative importance; data allow for statistical testing of hypotheses; objectives are usually to generalised to broader population and to predict; interpretations may be supported by quotations from text	Deep grounding in the data; if numbers are presented, they are usually presented as counts and percentages; description of specific situation or case accurately and thoroughly; may involve triangulation based on multiple data sources for the same concept; may use techniques to develop grounded theory to relate concepts and to suggest hypotheses that can be tested deductively; presentation "support[s] interpretations by weaving quotes from the analysed text and literature about the contexts of those texts into their conclusions, by constructing parallelisms, by engaging in triangulations, and by elaborating on any metaphors they can identify" (Krippendorff, 2004:88)
Use of computers	For dictionary-based content analysis or for developing environments prior to dictionary-based content analysis; also statistical tests; representative software for content analysis: VBPro, WordStat	As annotation and searching aids: representative software: Atlas.ti or NVivo

Source: White and Marsh (2006:35–36)

To produce satisfactory results, content analysis must possess reliability and validity elements and these are presented below.

5.3.2.6 Reliability and validity of content analysis

For content analysis to be effective, certain technical requirements, as identified in the literature, should be met. The first one is that categories of classification must be defined clearly and operationally. Secondly, there must be clarity as to whether an item belongs or does not belong to a particular category and, lastly, content analysis must demonstrate some characteristics of reliability and validity (Guthrie & Abeysekera, 2006). Julien (2008) concurs by confirming that once thematic categories are identified, they need to be defined carefully in ways that are comprehensive and mutually exclusive. Milne and Adler (1999) assert that only a few of the studies they analysed explicitly demonstrated rigorous reliability and replicability where sometimes measurement reliability is confused with coding reliability. Reliability in content analysis seeks to confirm that coded data produced and coding instruments are reliable. The Delphi Inquiry is used in this study to bring reliability to the coding instrument, which will also ensure replicability of the study.

The unit of analysis in this study is not limited to a word, sentence or paragraph but rather it was at the level of a phrase, clause or theme where meaning can be inferred (Samkin, Schneider & Tappin, 2014) as writers use grammar differently even though they deliver the same message (Unerman, 2000). Therefore, the use of sentences and paragraphs as the unit of analysis is dismissed since some writers may use fewer words while others use more words thereby using many sentences and possibly many paragraphs. Therefore, a phrase, clause or theme, where there is meaning, is identified for analysis.

Content analysis must be validatable in principle (Krippendorff, 2004). Validation brings about a number of benefits. It prevents analysts from pursuing research questions that allow no empirical validation or yield results without any backing except by the authority of the researcher. Secondly, validation enables the repeating of a particular content analysis that indicates the degree to which the original analysis was reliable. Thirdly, validation can increase confidence in the results of future content

analyses of similar texts and in similar contexts, but only if the classes of analysis and analytical constructs are used repeatedly so that any upcoming successes and failures can be weighed against each other ultimately advancing the technique (Krippendorff, 2004:39).

In qualitative terms, researchers seek trustworthiness and credibility by conducting iterative analyses, seeking negative or contradictory examples, seeking confirmatory data through methodological triangulation, and providing supporting examples for conclusions drawn (Julien, 2008). Trustworthiness may be improved by using more than one researcher to analyse the data and seeking agreement between different researchers on the content identified. While meaning is context dependant and subjective, reliability of judgement remains crucial in qualitative research. Lastly, researchers need to consider what is missing or not present in the text being analysed (Julien, 2008).

5.3.2.7 Link between content analysis and research objectives

Content analysis is a flexible method, which provides a systematic way of synthesising a wide range of data particularly analysing longitudinal data in order to demonstrate change over time (Julien, 2008). Analytical content analysis was performed to address Objective 1 and 2 in order to measure <IR> quality for the period 2013 to 2016. The degree of application of the <IR> framework by JSE listed companies was measured after developing the polychotomous accountability index. The PAI was ultimately used to measure IRQ attained by JSE listed companies. In other words, content analysis was utilised in the construction of the PAI and in testing the practicability and feasibility of the PAI on the 400 IARs. As the analysis of 400 IARs is done, codes were drawn and presented quantitatively. Therefore, coding as a construct is presented below.

5.3.2.8 Coding

Codes may be defined as "a word or short phrase that symbolically assigns a summative, salient, essence-capturing and/or evocative portion of language based or visual data" (Saldaña, 2013:03). Data may be in the form of interview transcripts, journals, documents, participant observation notes, photographs, email correspondence, literature, internet sites, and videos. Codes may be understood as concepts, and coding is the use of explicit criteria to identify concepts in a piece of text

or any form of visual data (Benaquisto, 2008). Coding has two broad categories and these are the first cycle coding methods and second cycle coding methods (Saldaña, 2013). First Cycle methods have different categories and they are summarised below.

Grammatical methods are those, which refer to the basic grammatical principles of a technique and not necessarily to the grammar of language. Examples include Attribute Coding, Magnitude Coding, Subcoding, and Simultaneous Coding. The next category is the **Elemental methods.** These are primary methods of qualitative data analysis, which have filters to review the body of literature, and build a foundation for future coding cycles. Examples include Structural Coding, Descriptive Coding, In Vivo Coding, Process Coding, and Initial Coding. **Affective methods** investigate subjective qualities of human experience by directly naming and acknowledging those experiences. Examples include Emotion Coding, Values Coding, Versus Coding, and Evaluation Coding (Saldaña, 2013).

Literary and language methods borrow from established approaches to the analysis of literature and oral communication. Types of these methods include Dramaturgical Coding, Motif Coding, Narrative Coding, and Verbal Exchange Coding. **Exploratory methods** are understood as exploratory and preliminary assignment of codes to the data before utilisation of more refined coding systems. They include Holistic Coding, Provisional Coding, and Hypothesis Coding. Lastly are the **Procedural methods** that are prescriptive and consist of pre-established coding systems or specific ways of qualitative data analysis. Examples of Procedural methods include Protocol Coding, Outline of Cultural Materials Coding, and Causation Coding (Saldaña, 2013).

After performing coding with First Cycle methods, Second Cycle methods complete the coding process. Second Cycle methods are relatively advanced ways of reorganising and reanalysing data coded through First Cycle methods. Data is reconfigured to develop a smaller list of categories, themes, concepts and assertions. Primarily, Second Cycle methods target a development of categorical, thematic, conceptual, and theoretical organisation from the First Cycle codes. Examples of Second Cycle methods are: Pattern Coding, Focused Coding, Axial Coding, Theoretical Coding, Elaborative Coding, and Longitudinal coding (Saldaña, 2013).

Guided by the paradigmatic, conceptual and methodological considerations, magnitude coding for measuring IRQ is selected. Furthermore, descriptive coding and focused coding are selected in order to analyse the interviews conducted with the JSE listed companies. Magnitude coding, descriptive coding and focused coding are discussed in detail below.

❖ **Magnitude Coding**

This consists of and adds supplemental alphanumeric or symbolic codes or sub-codes to an existing coded datum or category to indicate its intensity, frequency, direction, presence or evaluative content (Miles & Huberman, 1994). Magnitude codes may be qualitative or quantitative in nature and/or have nominal indicators to enhance description. Magnitude coding is relevant to descriptive studies that include basic statistical information like frequencies or percentages as well as depicting weight or importance of variables. Magnitude codes may consist of words or abbreviations that suggest intensity such as "strongly", "moderately" or "no opinion". Magnitude refers to frequency and uses words such as "often", "somewhat" and "not at all" (Saldaña, 2013). Moreover, magnitude codes may also suggest direction of a particular process, phenomenon or concept with the use of words such as "positive self-image" and "negative self-image". In varying cases, magnitude codes may use such terms as "positive", "negative", "neutral", "mixed", "high quality", "satisfactory quality", and "low quality" (Saldaña, 2013).

Lastly, in some cases, magnitude codes may consist of numbers instead of descriptive words in order to indicate intensity, frequency, or continuums depicting weight or importance. An example is "3=high", "2=medium", "1=low", and "0=none/not applicable" (Saldaña, 2013). This study measures the extent and quality of <IR> by JSE listed companies (as measured by the polychotomous accountability index) and therefore employs this technique where "0=no disclosure", "1=narrative disclosure", "2=narrative disclosure + quantitative disclosure", and "3=narrative disclosure + quantitative disclosure + comparative amounts from previous periods". However, these numbers and the descriptive words given above are merely for demonstration purposes since the descriptive words in the polychotomous accountability index may differ among the 44 elements contained in the disclosure framework. Next, to be

considered is descriptive coding.

❖ **Descriptive Coding**

Alternatively known as topic coding, descriptive coding primarily summarises data in a word or short phrase (Miles & Huberman, 1994). Often, the words are nouns, which make the basic topic of a passage of qualitative data. In other words, the codes are identifications of the topic and not merely abbreviations of content (Tesch, 1990).

Descriptive coding is appropriate for most qualitative studies, but particularly for beginning qualitative researchers learning how to code data, ethnographies, and studies with a wide variety of data forms, which may include interview transcripts, field notes, journals, documents, diaries, correspondence, artefacts, and videos. This coding method is appropriate for documenting and analysing the material products and physical environments of ethnographical fieldwork (Saldaña, 2013). Lastly, descriptive coding provides the necessary groundwork for Second Cycle coding and further analysis and interpretation. In this study, Focused coding is the selected Second Cycle method and is discussed below.

❖ **Focused Coding**

Focused coding selects the most frequent or the most important codes in order to develop the most suitable categories. The process requires decisions about which initial codes make the most analytic sense (Charmaz, 2006). Focused coding is appropriate for all qualitative studies but more specifically for studies, which employ the grounded theory methodology. It is also more useful for the development of major categories or themes from data. The primary role of this method is to develop categories without necessarily being distracted by properties and dimensions of data (Saldaña, 2013). After constructing the PAI, content analysis was performed through the drawing of codes. The coded data was then presented as a surrogate for IRQ. IRQ, as a concept, cannot be objectively measured like speed, weight, height or temperature. Therefore, the following section deconstructs this concept.

5.3.2.9 Integrated reporting quality

Quality is a concept that exists in many fields of research. Common examples of where the construct of quality is encountered include quality of life, quality of food, quality of

service provision, and quality of corporate disclosure, known as disclosure quality. Furthermore, the complex, context-sensitive and subjective nature of the concept manifests across the spectrum of different fields of research (Beattie et al., 2004:230). Of interest to this study is quality of corporate disclosure.

Quality is a complex and multi-faceted concept (Beattie et al., 2004:227). Botosan (1997:324) concurs by pointing out that quality, especially disclosure quality, is difficult to assess. Analytical studies define disclosure quality in terms of the precision of a Bayesian investor's belief about share value after receiving the disclosure (Beattie et al., 2004:230). Some studies define disclosure quality as the degree of self-interested bias in the disclosure while others define disclosure quality as the ease with which investors can read and interpret the information. Thus, these studies seek engagement with end users to establish information needs (Beck et al., 2010:210; Beattie et al., 2004:230).

There are different schools of thought where disclosure quality is concerned. Lang and Lundholm (1993) believe that higher quality disclosure is characterised by a clear and candid writing style that encompasses both narrative and numerical information as indicators of higher quality disclosure. Toms (2002) opines that a good report must not only show company objectives, but also includes activities and strategies to achieve these objectives. The provision of quantifiable and therefore verifiable information represents a higher quality of disclosures (Toms, 2002). Cormier, Magnan and Van Velthoven (2005) understand disclosure quality as the aggregate of perceived precision, relevance and usefulness of decision-making. Warsame, Neu and Simmons (2002:23) describe the concept of disclosure quality as "presence, specificity and organisation", which refer to the spread of issues addressed and the level of detail in the narrative (Beck et al., 2010:210).

Quality is a subjective and context dependent construct, therefore no definitive set of quality attributes and weightings of those attributes exists (Beattie et al., 2004). As shown above, there are different schools of thought concerning quality, which is an unsettled matter in the extant literature which also includes the measurement of quality. Quality cannot be measured directly therefore, different proxies or surrogates need to be employed in order to get the closest possible measure of quality. The

proxies are discussed below.

❖ **Disclosure quality proxies**

Botosan (1997:324) posits that disclosure is important but very difficult to assess and therefore researchers tend to assume that quantity and quality are positively related. Beattie et al., (2004:210) concur and remark that because of the "difficulty of assessing disclosure quality directly, disclosure index studies assume that the amount of disclosure on specified topics proxies for the quality of disclosure". This means that disclosure quality is not a directly measurable construct and hence a proxy or surrogate has to be used. A proxy then becomes the closest possible measure of reality (where reality itself is immeasurable).

The primary measure of disclosure quality is the actual amount of disclosure relative to the amount expected, given the company's size and complexity (Beattie et al., 2004). This is usually arrived at by utilising a dichotomous disclosure index or a polychotomous accountability index. It follows therefore that the bigger and the more complex a company is, the higher the expectations on the quality and complexity of disclosure. It is expected that a company, which says more, can be expected to avail a disclosure of higher quality.

The second proxy for disclosure quality is the spread of disclosures across topics. The Herfindahl index, which is a concentration measure, is calculated as:

$$H = \sum n_i = 1 P_i^2$$

where Pi is the proportion of disclosures in topic i. The H static has a maximum value of 1 if all text falls under one topic category and a minimum value of 1/n when the text units are spread evenly. The higher the H index, the poorer the spread. The index may be calculated at both the main topic level and the sub-topic level (Beattie et al., 2004). An alternative way of calculating spread is to count the number of non-empty sub-topics, which queries in how many sub-topics does a company make at least one disclosure. In such a case, a higher number of non-empty sub-topics indicate a better spread (Beattie et al., 2004).

As noted above, there are different proxies, which can be employed to measure

disclosure quality. In this study, proxy number one above (the actual amount of disclosure relative to the amount expected, given the company's size and complexity) was utilised to measure IRQ, which was denoted by an index called the Integrated Reporting Quality score. The IRQ score may be defined as a ratio between an entity's actual disclosure level and the maximum possible score that an entity may obtain by fully implementing the <IR> framework as denoted by the polychotomous accountability index. The measurement of quality was done using the PAI, as discussed in the previous sections. The IRQ scores were presented as mean annual scores, mean annual JSE sectoral scores, and mean annual JSE industry scores. The mean annual industry scores were further tested using the nonparametric test called Kruskal-Wallis test, which is articulated below.

❖ **Kruskal-Wallis test**

Nonparametric statistics are applicable when the variable being analysed does not conform to any known or continuous distribution (Zikmund, Babin, Carr & Griffin, 2013:516). The Kruskal-Wallis test can be used when three or more independent groups need to be compared, based on a single variable. This test is relevant when the sample groups from the population are small, when the distribution of data is not a normal distribution or if the data type is ordinal. This test shows statistically significant differences if the Asymp. Sig (the p value based on chi-square estimation) is below 0.05. If the Asymp. Sig is above 0.05, then the result were interpreted as statistically insignificant.

After computing IRQ scores for the period 2013 to 2016, factors that contributed towards such a degree of integration were established. This is Objective 3, which was executed through semi-structured interviews. As such, interviews are examined below.

5.3.3 Objective 3

To investigate factors that contribute towards a change in <IR> quality

In order to establish the contributory factors to the IRQ status quo, interviews were conducted with companies, which have the highest IRQ scores for 2013, 2014 and 2015. For 2016, the top two companies were selected. An interview, as a method of

research is interrogated below.

5.3.3.1 Interviewing

Interviewing, which is primarily located in the qualitative epistemology has its roots in anthropology and sociology, but has been adopted in other fields as well (Seidman, 2006). The term "interviewing" exists on a continuum, which encompasses highly structured, standardised, closed questions to unstructured, open-ended conversations. This method of research is most appropriate when the research question requires depth, specificity and when the researcher wants to learn about the experiences and perceptions of the respondent. Furthermore, the method is appropriate because it gives voice to the experiences of persons who are often marginalised in traditional, survey-based quantitative studies. Interviews may be categorised into three types, namely, unstructured interviews, structured interviews, semi-structured interviews. These are elaborated on below.

5.3.3.2 Unstructured interview

An unstructured interview is a qualitative research method, which involves asking respondents relatively open-ended questions in order to discover their perceptions on the topic of interest. The method tries to extract constructs espoused in their thinking and rationales for decision-making from the interviewee. This type of interview begins with a series of topics for discussion as opposed to specific questions being asked (Firmin, 2008). In the process, the discussion may develop into a more directed conversation to cover the required topics as the interviewer employs a more unguided approach. Exact words and phrases used may vary between interviews. Both open-ended questions and close-ended questions may be used under this method (Adams, Khan, Raeside & White, 2007). This is more of an inductive method of data collection.

The method has several advantages. The first one is that it puts the interviewees at ease so that they become more flexible, responsive and hence make disclosures that may not have emerged under different conditions (Smith, 2003). Furthermore, the method allows for a more relaxed, natural and conversational atmosphere for those taking part. Lastly, there is highly detailed valid qualitative data available to the researcher. While the method has advantages, it also has a number of limitations. Firstly, it is more difficult to replicate. Secondly, it is not particularly generalisable to a

wider population. Lastly, there is possible interviewer bias, which is manifested in the selective use of leading and spontaneous questions.

The method has five documented uses (Firmin, 2008). The first is that it is employed when studying relatively new domains. Secondly, the method is useful particularly where the researcher employs research waves. This means that the researcher may start with unstructured interviews and then proceed to perform structured interviews. Thirdly, unstructured interviews may be used when depth rather than breadth is the main purpose of the study. Fourthly, it is used when the researcher is dealing with articulate individuals and lastly, unstructured interviews are useful for ethnographic studies.

5.3.3.3 Structured interview

A structured interview resembles a questionnaire where the researcher asks a predetermined set of questions using the same wording and order of questions as specified in the interview schedule. The structured interview ensures that all persons are given equal opportunities to provide data across the same research questions (Firmin, 2008). Under this method, the researcher generates tentative hypotheses regarding what the respondent might contribute to the research that has been gathered. The hypotheses are usually generated using previous research, literature reviews, pilot studies or prior reasoning. The researcher does not attempt to superimpose his/her viewpoints but rather extracts perspectives that the respondent does not innately possess (Saunders, Lewis & Thornhill, 2009). The key feature of a structured interview is in the pre-planning of the questions. An interview schedule is defined as a written list of questions that may be open-ended or close-ended for use by the interviewer in a person-to-person interview. This type of interview may be done face-to-face, by telephone or through any other electronic medium. There is a general adoption of close-ended questions under this method (Kumar, 2005).

There are four areas of research where structured interviews may be used. The first is where one makes comparisons among groups. Secondly, interviews may be used when conducting interview waves. When the primary design of study is quantitative research, then structured interviews may be used to complement or supplement the research findings with an open-ended component. Lastly, structured interviews may

be used when interviewing low-functioning individuals, such as homeless people or those with developmental disabilities who may tend to deviate from the topic at hand (Firmin, 2008).

Structured interviews have a number of advantages. The first one is that standardisation of all questions may bring about quantifiable data, which makes subsequent analysis less complex. Secondly, there are replication possibilities due to the uniformity of information (Firmin, 2008). This ultimately makes comparability of data feasible. Thirdly, the method gives a degree of generalisation of results to the population from which the sample is drawn. The fourth advantage is that fewer interviewing skills are required as compared to an unstructured interview. Lastly, data is considered more reliable because of internal consistency (Malcom, 2003). In other words, closed questions eliminate the opportunities for errors, which are associated with open questions.

Despite the advantages highlighted above, the method has drawbacks. The first disadvantage is that restrictive questioning leads to restrictive answers. In other words, closed questions sacrifice the comparative advantage of the interview method by failing to include the flexibility and richness of responses offered by open-ended questions (Adams et al., 2007). Secondly, the method may be insensitive to respondents who need to express themselves. Therefore, important information might be left out due to the restrictive nature of the method. The third disadvantage is that there are sometimes validity issues with the questions. This particularly refers to the appropriateness of the questions (Creswell, 2014).

5.3.3.4 Semi-structured interview

A semi-structured interview is a qualitative data collection strategy in which the researcher asks respondents a series of predetermined but open-ended questions. The interviewer has more control over the topics of the interview than in an unstructured interview. As compared to the structured interview or questionnaires that use closed questions, there is no fixed range of responses to each question (Ayres, 2008). The researcher who uses this method develops a written interview guide in advance. The guide may be very specific or may be a list of topics that need to be covered. The order with which the questions are asked does not really matter therefore

the interviewer may follow the order or may move back and forth through the topic list. The key point is that the research question, and the conceptual model of the tenets guiding the research, guides the topic list. A semi-structured interview makes use of different kinds of open-ended questions and utilises a variety of probes that elicit further information or build rapport by using active listening skills (Saunders et al., 2009).

Semi-structured interviews are useful particularly where concepts and relationships are relatively well understood. Due to some degree of structure in the interview, the resulting data is a collaboration between the interviewer and the respondent. To ensure interpretive validity, the interviewer must avoid leading questions. Lastly, the development of rich, relevant data rests upon the interviewer's ability to understand, interpret and respond to the verbal and non-verbal information provided by the respondent.

Interviewees in the study

In this study, semi-structured interviews were conducted to answer research question number three, which is articulated in Chapter 1 that reads, "What are the factors that have contributed towards a decline/improvement in the quality of IARs?" After applying the polychotomous accountability index to assess and evaluate the quality of IARs, semi-structured interviews were conducted to establish the factors that contribute to an improvement or decline in the quality of IARs. Semi-structured interviews answered research question number four presented in Chapter 1, which reads, "What are the current challenges and limitations to <IR> framework application by JSE listed companies?"

Five companies (represented by their respective preparers of IARs) were selected to participate in the interviews. For 2013, the company with highest the IRQ score was chosen for the interview. The same criterion was used to select companies for the semi-structured interviews for the years 2014 and 2015. As for 2016, two companies were selected to participate in the semi-structured interviews, one that had the highest IRQ score and the other had the second highest IRQ score. The interviews were face-to-face and were therefore conducted at the companies' premises (or any other suggested venue). The times of the interviews were determined by the selected

companies. The five companies had representatives who are presented in the Table 5.2 below.

Table 5.2: Respondents representing their respective companies

Year	2013	2014	2015	2016		Total
Number of companies	1	1	1	1	1	5
Number of people	2	1	2	1	2	8

Semi-structured interviews are chosen mainly because the researcher is not experienced enough to conduct an unstructured interview. Semi-structured interviews are conducted because the unstructured element of the interview enabled disclosure of critical points, which could not have been possible with a structured interview (Jordan & Gibson, 2004). The selection of preparers of IARs is informed by the fact that most studies have focused on documentary evidence, thereby ignoring the preparers' views (Chaidali & Jones, 2017). These interviews with preparers covered the gap in the literature. Advantages of interviews are expanded on in the following section.

5.3.3.5 Advantages of interviews

Use of interviews has several advantages. Firstly, questions can be explained. This minimises chances of misunderstanding by the interviewee since the interviewer may repeat or rephrase a question to enhance understanding (Kumar, 2005). Secondly, information may be supplemented. An interviewer is able to provide supplementary information acquired from non-verbal observations. This ultimately enriches the responses. The third advantage is that interviews are more appropriate for complex and sensitive situations. The interviewer will have time to prepare the respondent before asking sensitive questions (Kumar, 2005). The fourth advantage is that interviews are very useful for collecting in-depth information as the interviewer is able to develop rapport with participants.

The interviewer may get more insights from observations in the form of body language and these are often missed in other forms of data collection (Clark, 2008). The fifth advantage is that interviewing has a wider application. This means the method can be

used with almost any type of population like children, handicapped, the very old, and the illiterate (Kumar, 2005). It is adaptable to a wide range of themes and topics (Seetaram, Gill & Dwyer, 2012). The last advantage of employing interviews over other methods of data collection is that interviewing is of an iterative nature and this ensures the validity and accuracy of the method (Seetaram et al., 2012). Having identified the advantages of interviews, the study outlines the disadvantages of interviews below.

5.3.3.6 Disadvantages of interviews

While interviews are recommended for this kind of study, they do have a number of disadvantages. The first one is that the quality of data depends upon the quality of interaction. This means that, if the level of interaction between the interviewer and the interviewee is good, then it is anticipated that the responses will also be of a higher quality. However, if the level of interaction is not good, then the quality of responses will also not be good as well (Kumar, 2005). This usually comes about if a partnership has not been established between the researcher and the respondent. Possible causes of such a scenario are power differentials and status differences including class, gender, race and ethnicity (Seetaram et al., 2012).

The other limitation is that interviewing is time consuming and expensive. Time consumption exists in the pre-interview process, the interview process and the post-interview transcription and analysis (Seetaram et al., 2012). Interviews become expensive, particularly where respondents are not within the same geographical area. The other disadvantage is that the quality of data depends on the quality of the interviewer (Jordan & Gibson, 2004) but this can be enhanced through investment in training, experience and confidence development in the implementation process of the interview process (Seidman, 2006). Another limitation is that the researcher may introduce bias. Researcher bias is found in the framing of questions and interpretation of responses (Kumar, 2005). Next, to be reviewed is the reliability and validity of interviews.

5.3.3.7 Reliability and validity of interviews

Qualitative reliability refers to whether the researcher's approach is consistent across different researchers and different projects, while qualitative validity refers to the researcher's checks for the accuracy of the findings by employing certain procedures

(Gibbs, 2007). Validity entails determining whether the findings are accurate from the standpoint of the researcher, the participant, or the readers of an account (Creswell, 2014: 251). Terms like trustworthiness, authenticity, and credibility are associated with validity (Creswell, 2014). A number of techniques are recommended, which assist in ensuring reliability and validity of questions, responses and data. Some of the techniques are indicated below.

- ❖ **Appropriate and careful selection of sample or panel to minimise biases and errors**

The person chosen carry out an interview has a powerful impact on the overall outcome of the research. Prejudice in this case is not only confined to the interviewer but can be found in the respondent as well. Some respondents may have memory failure and not realise the response is untrue. In other cases, respondents give responses that they believe the researcher wants to hear (Seetaram et al., 2012). In this study, minimising of bias and error was ensured by getting to know interviewees and their social and economic context. Individuals were motivated to respond by emphasising the importance of their contribution to the study. Appropriate questioning techniques, such as funnelling questions, asking unbiased questions, clarifying issues and assisting individuals via probing, were used. The interviewer will use different types of probes which include repeating the question if the interviewee strays, explanatory probes, focused probes, giving examples, and reflecting on probes (Adams et al., 2007).

❖ **The role of triangulation and other methods of trustworthiness**

Lincoln and Guba (1985) posit that there is need for the inclusion of the criterion of trustworthiness in all forms of qualitative inquiry, including interviews. Trustworthiness is enhanced by developing a research design that assures the four criteria for inquiry, which are named by Maxwell (2005) as credibility, transferability, dependability and confirmability. Credibility, which is analogous to internal validity for a quantitative design, may be enhanced by using techniques like prolonged engagement, persistent observation, and member checks (DeCrop, 2004). Transferability, which is synonymous to external validity for a quantitative design, may be accounted for through purposive sampling.

Dependability, which equates to reliability for a quantitative design, may be increased through the development of a research plan, which includes an audit trail of transcripts, a personal journal of the research process maintained by the researcher, prolonged engagement, and the inclusion of a research auditor (DeCrop, 2004). Confirmability relates to the assurances that varieties of explanations about the phenomenon are being studied. Triangulation in qualitative research, as explained in section 4.2.1, refers to the use of more than two data sources (data triangulation), methodological approaches (method), researchers (investigator), or theoretical perspectives to approach a problem (Seidman, 2006). Ultimately, triangulation's main function is to increase confidence in the results.

❖ **Conducting an ethical study that accounts for the respect and confidentiality of the respondents**

The purpose of the study must be explicitly explained to the respondents. Risks that the respondents may incur by participating in the study should be outlined. The exact parameters and expectations of confidentiality (Hesse-Biber & Leavy, 2011) and the notification of who will have access to the data must be divulged. Ethical clearance has been obtained from the College of Accounting Sciences Research Ethics Review Committee (see Appendix H) and was presented as the ethical framework informing and guiding the research project.

❖ **Finding the appropriate length and structure for the interview**

Determining the appropriate length and structure of the interview maximises advantages of the interview. Respondents appreciate and respond to researchers who respect their time and resources by keeping the interview on task but not regimental, structured but not rigid, and appropriate but not constrained (DeCrop, 2004).

❖ **Applying active listening techniques and taking advantage of the iterative nature of interviewing**

The researcher was actively listening to gain the trust of the listener. Other qualities that the researcher needs are to be interviewee focused, supportive but non-interruptive, non-judgemental, accepting of differences, allowing for and listening to the importance of silences, and resisting the urge to put words into the respondent's mouth (Seetaram et al., 2012). The other crucial element, which forms part of interviews, is audio recording and is addressed in the section below.

5.3.3.8 Audio recording

The semi-structured interviews were audio-recorded. Audio recording allows the interviewer to focus on questioning and listening. It also allows questions formulated at an interview to be accurately recorded for use in later interviews where appropriate. Furthermore, audio recording produces accurate and unbiased reports. The interviews can be replayed, direct quotes can be used and a permanent record was available for others to use (Saunders et al., 2009). Audio recording has a number of disadvantages. There is always a possibility of a technical problem. Audio recording might inhibit some interviewee responses and reduce reliability. The recording of the interview might negatively affect the relationship between the interviewer and the interviewee and, finally, transcribing the audio-record is time consuming. (Morgan & Guevara, 2008). Once the data is collected using various methods, it has to be analysed. The next section therefore addresses the process through which data collected were analysed.

5.3.3.9 Qualitative data analysis

Qualitative data analysis relates to identifying, coding and categorising patterns or themes found in the data. The clarity and applicability of findings depends mainly on the analytic abilities of the researcher. This dependence on the capabilities of the

researcher can be considered as the greatest weakness or strength of a qualitative research study (Creswell, 2014). The double-coding approach was utilised in this study. Two independent coders performed the manual magnitude coding of the 400 IARs over a period of four months (the first coder is the researcher of this study and the second coder is a post-doctoral fellow with a PhD in corporate reporting). The two coders displayed a reasonably high level of consistency in benchmarking the IARs against the polychotomous accountability index. The utilisation of the double-coding approach minimises any potential subjectivity that might appear in the coding process therefore any disagreements between the two coders were addressed.

After preparing the PAI (Objective 1), after testing the feasibility and practicability of PAI on 400 IARs (Objective 2), and after establishing the factors that contribute towards a change in IRQ, then the researcher would be in a position to make suggestions and recommendations about <IR> by listed companies. This becomes the last objective (Objective 4), which purports to make suggestions and recommendations about <IR> by listed companies in the light of research findings. The researcher would then draw deductive inferences as understood and interpreted from the data.

5.4 Research population and sample

The study focuses on the companies listed on the JSE's main board mainly because their IARs are readily available. Alternative board companies and non-listed companies are excluded from this study. The sample of this study, created through judgemental or purposive sampling, is made up of the Top 100 companies on the JSE rankings using the 2013, 2014, 2015 and 2016 rankings. I-Net BFA compiles the Top 100 Companies survey. The survey recognises listed companies that have earned the most wealth for their shareholders. A four-year period is considered in order to determine whether the quality of <IR> improved or declined over time after <IR> was mandated in March 2010. Top 100 companies were selected based on the premise that, since they were in the top 100 from a population of over 400 companies, they are well run, transparent and are more likely to have IARs, which are more aligned with the <IR> framework. Furthermore, Top 100 companies are more visible and have more resources to adopt new initiatives relating to <IR> and are hence likely to have

high quality IARs. Since the Top 100 companies are, on average, large in size, they therefore have more media and international exposure, and are likely to have implemented <IR> better than smaller companies. Furthermore, their IARs are readily available and easily accessible from the individual companies' websites through I-Net BFA database.

A word of caution is that this study intended to measure and evaluate the disclosure and reporting quality for companies in general, not the disclosure quality for one particular company. Therefore, it is expected that the top 100 companies' lists may differ over the four-year period (Cronjé, 2007). The study does not seek to establish IRQ per company but for all the sampled JSE listed companies. Therefore, the reported IRQs were the mean annual scores for all companies in the yearly sample for the four years.

5.5 Summary and conclusions

The chapter started off by explaining research methodology. It was noted that research methodology entails plans, procedures, methods of data collection, analysis and interpretation in a study. The research design, which is identified as the explanatory sequential mixed methods, was also expounded on, particularly focusing on its origins, its characteristics, its advantages and the rationale of why it was used for this study instead of the quantitative or the qualitative method. Research methods were then analysed and justified. Each research objective was matched with the respective research methods and any other major related concepts. Under Objective 1, disclosure indices were analysed by tracing their development and first use in research. The types of disclosure indices were examined and the PAI was constructed. In constructing the PAI, expert opinion is sought through the Delphi Inquiry. The method is considered for its ability to improve the reliability and validity of the index. The Delphi-Inquiry was also expounded on under Objective 1.

Under Objective 2, content analysis was discussed. The researcher first established the historical, origins and evolution of content analysis. Next, the typologies of content analysis were presented and it was noted that content analysis could be either quantitative or qualitative in nature. Both the quantitative approach and the qualitative approach are adopted in this study. It was also noted that quantitative content analysis

may be categorised into two sub-typologies, namely, mechanistic content analysis and interpretative content analysis. The characteristics of content analysis and measures to ensure validity and reliability were also discussed and a link was drawn between content analysis and the research objectives.

Under Objective 2, the concept of coding was elaborated. Attention was given to the definition and the different methods of coding used in this study, particularly magnitude coding, descriptive coding and focused coding. The next concept to be analysed was IRQ and the different disclosure quality proxies, which included a choice of disclosure quality proxy. Lastly, under Objective 2, the Kruskal-Wallis test was presented.

The next aspect, which was analysed under Objective 3, is the interview method. Three types of interviews were explained, namely, unstructured interview, structured interview and semi-structured interview. Due to its appropriateness, the semi-structured interview is selected for this study. Advantages and disadvantages of using interviews in a research study were also addressed. Measures to ensure reliability and validity of questions, responses and data were explained in detail. Audio-recording, qualitative data analysis, research population and sample were presented and lastly, the summary and conclusions were presented in Chapter 4. Chapter 6 below deals with the analysis of results from quantitative data, while Chapter 7 deals with the analysis of results from qualitative data.

CHAPTER 6

ANALYSIS OF RESULTS: QUANTITATIVE DATA ANALYSIS

6.1 Introduction

The chapter presents the results, which address the research objectives raised in section 1.4. Objective 1 is addressed by presenting the draft Polychotomous Accountability Index (PAI), the recommendations made by the Delphi panellists and the final PAI. These are detailed from Table 6.1 to Table 6.6. The chapter also on the addresses Objective 2, by presenting the JSE listed companies' mean annual Integrated Reporting Quality (IRQ) scores for 2013, 2014, 2015 and 2016. These mean IRQ scores, descriptive statistics and comparative analyses between the mean IRQ scores are presented in detail in Table 6.7 to Table 6.15.

The second objective was further addressed by a tabulation of IRQ scores per JSE sectors for the years 2013, 2014, 2015 and 2016. A comparative analysis of IRQ scores across the JSE sectors was performed for the period 2013 to 2016. The JSE sector-related analysis of results is presented from Table 6.16 to Table 6.20.

Still addressing Objective 2 was a tabulation of IRQ scores per industry for the years 2013, 2014, 2015 and 2016. A comparative analysis of IRQ scores across industries was performed for the period 2013 to 2016. The Kruskal-Wallis test is the last element to be presented in addressing Objective 2. The JSE industry-related analysis of results is presented from Table 6.21 to Table 6.26. The chapter concludes with a summary and conclusions on the quantitative data analysis.

6.2 Objective 1 addressed

The first objective is "To develop an extensive weighted polychotomous accountability index to measure the extent and quality of <IR> disclosures by the JSE listed companies". Fulfilling Objective 1 was done by developing the PAI through the six-stage process explained in detail under section 5.3.1.1. The first stage entailed studying the <IR> framework and any other relevant literature on <IR>.

The second stage was marked by determining the objectives of the PAI. The main

objective of the PAI is to measure the extent and quality of IARs. Measurement of the extent and quality of IARs goes beyond the presence or absence of a variable. It also evaluates the meaningfulness and reasonableness of a disclosure.

The third stage is marked by an identification of the appropriate constructs to be disclosed in an IAR. This process is informed by the content elements, the guiding principles of the <IR> framework, and the extant literature on <IR>. To accomplish stage three, the constructs for the draft PAI were identified and are presented below in Table 6.1.

Table 6.1: Draft PAI Categories, Constructs and Weights

Category	Number of constructs	Total score	Weight calculation	Weight %
1. Organisational overview and external environment	4	19	19/96 X100	19.79
2. Governance	3	11	11/96 X 100	11.46
3. Business model	3	12	12/96 X 100	12.5
4. Risks and opportunities	3	9	9/96 X 100	9.38
5. Strategy and resource allocation	4	14	14/96 X 100	14.58
6. Performance	4	14	14/96 X 100	14.58
7. Outlook	3	8	8/96 X 100	8.33
8. Basis of preparation and presentation	3	9	9/96 X 100	9.38
	27	**96**	**96/96 X 100**	**100**

Twenty-seven constructs belonging to eight categories were identified. With different weights per category, the different categories have a total score of 96 points. The maximum weight for all the eight categories is 100%. "Organisational overview and external environment" has the highest weight of 19.79%, while "strategy and resource allocation" and "performance" have the second highest weights of 14.58% each. "Outlook" has the lowest weight of 8.33%, while "risks and opportunities", and "basis of preparation and presentation" have the second lowest weights of 9.38% each. In total, the Draft PAI has 27 constructs (grouped into eight categories) with a total score of 96 points, and all weighted to give 100%. From these different categories and constructs, the draft PAI was crafted (fulfilling stage four explained in section 6.1 above) and is presented below in Table 6.2.

Table 6.2: Abridged Draft Polychotomous Accountability Index
(see Appendix A1 for a detailed Draft PAI)

1. ORGANISATIONAL OVERVIEW AND EXTERNAL ENVIRONMENT	Total
Construct	**19**
1.1. Mission and vision	3
1.2. Competitive landscape, market positioning and positioning within value chain	5
1.3. Key quantitative information	3
1.4. Operation context	8

2. GOVERNANCE	Total
Construct	**11**
2.1. Governance and strategic decisions-actions undertaken to monitor and influence strategic direction and risk management	4
2.2. Reflection of organisational culture, ethics and values in use and effect on capitals, relationship with key stakeholders	3
2.3. Link between remuneration (incentives), and value creation in the short, medium and long term; link between remuneration (incentives), and organisation's use of and effects on capitals	4

3. BUSINESS MODEL	Total
Construct	**12**
3.1. Major variables of the business model	4
3.2. Stakeholder dependencies	4
3.3. Connectivity between business model and other content elements	4

4. RISKS AND OPPORTUNITIES	Total
Construct	**9**
4.1. Major risks including Key Risk Indicators (KRIs)	4
4.2. Major opportunities	4
4.3. Assessment of the likelihood of occurrence of risk or opportunity and magnitude of effects	1

5. STRATEGY AND RESOURCE ALLOCATION	Total
Construct	**14**
5.1. Strategic objectives	4
5.2. Competitive advantage as influenced by innovation, intellectual capital, environmental and social considerations	4

5.3.	Stakeholder consultations performed in formulating strategy and resource allocation plan	3
5.4.	Link between strategy and information from other content elements	3

6. PERFORMANCE	**Total**
Construct	**14**
6.1. Key Performance Indicators (KPIs)	4
6.2. Explanation of KPIs	4
6.3. Entity's effects on capitals	3
6.4. Past, current and future performance	3

7. OUTLOOK	**Total**
Construct	**8**
7.1. Expected changes	3
7.2. Potential implications	3
7.3. Estimates	2

8. BASIS OF PREPARATION AND PRESENTATION	**Total**
Construct	**9**
8.1. Materiality determination process	4
8.2. Frameworks and methods used in the materiality determination process	2
8.3. Reporting boundary	3

To accomplish stage four (as explained in section 5.3.1.1), the Draft PAI was developed as informed by the categories, constructs and weights presented in Table 6.1 above. "Organisational overview and external environment" carries the highest weight (19 out of 96), thereby contributing a weight of 19.79%. "Outlook" has the least weight of 8.33%, carrying a total score of 8 points out of 96.

To accomplish stage five (as explained in section 5.3.1.1), the Draft PAI was sent to the Delphi panellists to evaluate the adequacy and reasonableness of the constructs and weights. The Delphi panellists were given access to the Delphi questionnaire (Draft PAI) and they made suggestions and recommendations on whether to increase/decrease the number of constructs, to clarify the constructs, or to increase/decrease the number of ordinal scores per construct, or to make any other suggestions and recommendations, which they deemed relevant. Suggestions and

recommendations where at least three Delphi panellists had consensus, were incorporated into the draft PAI. Those recommendations and suggestions, which were incorporated into the draft PAI, are presented below in Table 6.3.

Table 6.3: Suggestions and recommendations contributed by Delphi panellists

1. ORGANISATIONAL OVERVIEW AND EXTERNAL ENVIRONMENT		
Construct	**Suggestions, recommendations and comments**	**Total 8**
❖ **Mission/purpose and vision/ambition**	"Purpose" and "ambition" were recommended in order to broaden the scope of different terminologies commonly used by listed companies.	3
❖ **Culture, values and ethics/philosophy**	Current global reporting trends distinguish between "mission/purpose and vision/ambition", and "culture, values and ethics/philosophy". Therefore, a new construct of "culture, values and ethics/philosophy" was created and has three-point ordinal scores.	2
❖ **Ownership and operating structure**	Ownership structure-shows amounts of ownership claims held by management (insiders) and outside investors who are not part of the entity's management. This is important because it affects the incentive schemes for managers, and thereby efficiency of entities. Operating structure enlightens stakeholders on the organisational hierarchical arrangement of lines of authority, communication, rights and duties. Ultimately, three-point ordinal scores were generated.	2
❖ **Key quantitative information: Broad-Based Black Economic Empowerment (B-BBEE) level**	In addition to the three existing quantitative metrics under this construct, a recommendation was made to create the fourth ordinal score, namely, the B-BBEE level. This is deemed critical in the South African context since it measures the extent to which listed companies comply with B-BBEE legislation. This legislation (B-BBEE Act, Number 53 of 2003) redresses the economic and social imbalances brought about by apartheid.	1

Table 6.3 continued

2. GOVERNANCE		
Construct	**Comments**	**Total 8**
❖ **Leadership structure**	It was suggested to have a construct, which relates to the organisation's leadership structure. This construct was deemed important because users will have the privilege of knowing the people entrusted with the responsibility of creating value for the organisation. Users will have an opportunity to interrogate the leadership's skills, diversity, backgrounds, gender, competencies and experience in order to make sound economic decisions. Ultimately, three-point ordinal scores were developed.	2
❖ **Governance practices meet or exceed legal requirements**	Having companies evaluate themselves on how their governance framework meets the legal requirements enhances decision-usefulness of the IARs. For users to make sound economic decisions, it is important for them to know whether an organisation complies with legal requirements or not. Three-point ordinal scales where suggested in order to fulfil this recommendation.	2
❖ **Promotion and enabling of innovation**	Level of innovation is a surrogate measure of how companies are planning and managing their future sustainability endeavours. As such, stakeholders were more informed (therefore make sound investment decisions) of how a company sustains itself into the foreseeable future. As a result, four-point ordinal scores were developed.	3
❖ **Connectivity between remuneration (incentives), and value creation in the short, medium and long term; connectivity between remuneration (incentives), and organisation's use of and effects on capitals**	A recommendation was made to substitute the word "Link" with "connectivity", which is one of the guiding principles promulgated by the IIRC. This approach would ultimately have the potential to challenge companies to reflect in their disclosures how they applied the guiding principles in the IARs. In addition to the four-point ordinal scores, a fifth one was recommended since it improves intra-company comparability of IARs. The fifth ordinal score pertains to a detailed remuneration policy including both financial and non-financial performance indicators, and comparatives with other years' IARs.	1

Table 6.3 continued

3. BUSINESS MODEL		Total 13
Construct	**Comments**	
❖ **Major variables of the business model**	In order to enhance understandability of the business model, the Delphi panellists recommended distinguishing between undetailed and detailed disclosure of inputs, business activity, output and outcome. Resultantly, three-point ordinal scores were created.	7
❖ **Narrative flow of the business model**	This enhances understandability of the business model since some users and preparers perceive this to be a relatively difficult concept, as elucidated under section 7.3.1. Ultimately, three-point ordinal scores were created.	2
❖ **Connectivity between business model and other content elements**	In order to improve connectivity of different departments and eliminate silos within an organisation, it was recommended to have a fourth ordinal score, which reads as "4=connectivity to 7 or 8 elements". Better connectivity will lead to better cooperation, which improves organisational efficiency.	4
4. RISKS AND OPPORTUNITIES		Total 6
❖ **Assessment of the likelihood of occurrence of risk or opportunity and magnitude of effects**	It was noted that a mere mention of the major risks and major opportunities was not enough to be informative. Therefore, an assessment of the likelihood of occurrence of risk or opportunity was considered imperative. As a result, four-point ordinal scores were created.	4
❖ **Steps to mitigate/manage risk or capitalise on the opportunity**	It was recommended that steps to manage risks or capitalise on opportunities be included in the index because these are some of the variables, which determine sustainability of an organisation into the future. Therefore, their presence will increase the decision-usefulness of IARs. Ultimately, three-point ordinal scores were created.	2

Table 6.3 continued

5.	STRATEGY AND RESOURCE ALLOCATION		
Construct	**Comments**	**Total 14**
❖ **Strategy implementation as per business model**	It was recommended that having a strategy implementation plan as per business model enhances the decision-usefulness of IARs. This, in turn, enables users to interrogate the organisation's strategies and informs their investment decision-making. As a result, five-point ordinal scores were created.	3
❖ **Resource plan as per business model**	This variable improves the informativeness of IARs and this gives users an opportunity to evaluate whether the organisation's resources are being optimally utilised. As a result, five-point ordinal scores were developed.	4
❖ **Measurement criteria for achievements and target outcomes in the short, medium and long term**	This construct enhances the usefulness of IARs by showing where the organisation intends to go and how it plans to get there. This is revealed by showing the organisation's target outcomes in the short, medium and long term. Eventually, five-point ordinal scores were generated.	4
❖ **Connectivity between strategy and information from other content elements** (examples include business model, risks, opportunities etc.)	This shows how an organisation intends to create value by operationalising the business model coherently. As such, users of IARs were given an opportunity to test the soundness of the value creating imperatives. In the end, four-point ordinal scores were developed.	3

Table 6.3 continued

6. PERFORMANCE		
Construct	**Comments**	**Total 9**
❖ **Explanation of KPIs**	Panellists suggested the inclusion of assumptions used in compiling KPIs. This construct would enable users to have a similar perspective (by sharing similar assumptions) with preparers of IARs. Sharing a similar perspective is important when replicating and interpreting calculations. Resultantly, a sixth ordinal score was introduced under this construct.	1
❖ **Entity's effects on capitals:** financial, manufactured, intellectual, human, social and relationship, and natural	A suggestion was made to show the quantitative and comparative trade-offs for the capitals utilised in the business model. As a result, the fourth ordinal score was developed. Delphi panellists posited that this requirement would push companies to be conscious and accountable of their influence on natural capital and social and relationship capital (the two capitals that are often underreported because of their complexity).	1
❖ **Stakeholder relationships:** state of the key stakeholders' relationships and how the entity has responded to stakeholders' legitimate needs and interests	The panellists suggested that the relationship between the organisation and stakeholders be evaluated on some performance scale of four-point ordinal scores. The rationale behind this is that users of IARs may be more informed on how the organisation interacts with its stakeholders. This construct partly fulfils the qualitative disclosure of social and relationship capital. In the end, four-point ordinal scores were created.	3
❖ **Connectivity and financial implications:** Connectivity (causal relationships) between financial performance with key economic, environmental and social information from other content elements.	The causal relationship between connectivity and financial implications helps users of IARs to understand and appreciate the importance of connectivity among the content elements of the <IR> framework. As such, the higher the connectivity, the higher the financial benefits. Ultimately, five-point ordinal scores were developed.	4

Table 6.3 continued

7.	OUTLOOK		
Construct		**Comments**	**Total 3**
❖ **Organisational readiness:** this is a reflection of the entity's preparedness to deal with anticipated changes together with the potential implications		During periods of market volatilities, it is crucial for organisations to show how prepared they are to deal with anticipated/unanticipated changes together with the potential implications. Presence of such information in the IAR equips users of IARs with the knowledge of how an organisation is able to absorb or deal effectively with foreseen or unforeseen realities. This will help them to make better investment decisions. Ultimately, five-point ordinal scores were developed.	2
❖ **Estimates:** lead indicators for outlook. Examples include forecasts and projections, targets, sensitivity analyses, estimates of KPIs or objectives, KRIs, relevant information from recognised external sources, and significant assumptions.		The panellists recommended having forecasts, targets, projections, sensitivity analyses and that estimates of KPIs and KRIs on financial and non-financial indicators be compared to similar information for other financial year-ends. This comparative analysis will improve the informativeness of IARs, which ultimately contributes to better decision-making by users of IARs. Eventually, a fourth ordinal score was created to fulfil this recommendation.	1

Table 6.3 continued

8.	BASIS OF PREPARATION AND PRESENTATION		
Construct		**Comments**	**Total 14**
❖ **Guiding principles:** this is neither a construct of the Draft PAI nor the Final PAI therefore there is no mark allocation in the "total" column. This is merely what Delphi panellists said about the relationship between guiding principles and content elements.		The Delphi panellists recommended the blending of some of the guiding principles (see section 3.9) with the appropriate content elements (see section 3.7.1) and they are elaborated below: a) Guiding principle of connectivity of information to be blended with two content elements, namely, performance and strategy, and resource allocation. b) Stakeholder relationships be blended with performance c) To blend conciseness with the basis of preparation d) Blend reliability with basis of preparation and presentation.	0
❖ **Reporting boundary** *(operational boundary not time frame of the report).* Material risks, opportunities and outcomes associated with entities/stakeholders included in the IARs		Delphi panellists recommended the inclusion of a definition of the reporting boundary. The boundary under discussion should be understood to be the operational boundary, not necessarily the time frame of the report. As such, a definition that clarifies the nature of the boundary was inserted under the construct.	3
❖ **Conciseness and linkages:** IAR follows a logical structure and includes cross-references; clarity of language and specificity of concepts		Financial reporting has been under scrutiny for producing reports, which are long and verbose. <IR> is attempting to address the limitation by encouraging concise IARs. The Delphi panellists therefore recommended the inclusion of this construct to enhance understandability of IARs. This construct comes on a background of some companies' Corporate Annual Reports that are over 600 pages in length. In the end, the construct was created with a three-point ordinal scale.	2

Table 6.3 continued

8. BASIS OF PREPARATION AND PRESENTATION continued …		
Construct	**Comments**	**-**
❖ **Reliability:** is enhanced by mechanisms like robust internal control, stakeholder engagement, internal audit functions, and independent external assurance	This construct enables organisations to produce IARs, which are free from material error, faithfully represent their value creation status and potential. This will ultimately improve the decision-usefulness of IARs. Therefore, the construct of reliability was generated with four ordinal scores.	3
❖ **Responsibility for an IAR:** acknowledgement of responsibility to ensure integrity of the IAR and acknowledgement of application of collective minds in the preparation and presentation of the IAR. Conclusion on whether the IAR is prepared and presented according the <IR> framework	To enhance the reliability and integrity of an IAR, organisations' leadership should disclose whether they applied their collective minds in producing the IAR. The leadership must also confirm the absence or presence of an internal audit function, mandatory audit or external assurance on non-financial matters. This will improve reliability and trustworthiness of the IAR, which ultimately allows IAR users to make more informed economic decisions. Eventually, the construct was made with a four-point ordinal scale.	3
❖ **Transformation:** This guided by the BBBEE Act, Number 53 of 2003	This construct is not part of the <IR> framework. Delphi panellists agreed on the relevance of this construct in the South African context and recommended its inclusion in the Draft Index. The act attempts to redress the negative consequences of the apartheid system and purports to empower the formerly disadvantaged races. As such, organisations are compelled to report in their IARs the extent to which they have transformed by making use of BBBEE codes. Ultimately, the construct was created with four ordinal scores.	3

Table 6.4: Summary of categories and constructs affected by the Delphi panellists' suggestions and recommendations

Category	Constructs affected	Total score
1. Organisational overview and external environment	4	8
2. Governance	4	8
3. Business model	3	13
4. Risks and opportunities	2	6
5. Strategy and resource allocation	4	14
6. Performance	4	9
7. Outlook	2	3
8. Basis of preparation and presentation	5	14
	28	**75**

Table 6.3 and 6.4 show the suggestions and recommendations made by the Delphi panellists (Table 6.3 is detailed, showing the suggestions and recommendations while Table 6.4 is a summary of the categories and constructs affected by the same recommendations and suggestions). "Basis of preparation and presentation" received the highest number of suggestions on both the constructs (5) and the total score (14), while "outlook" received the least input for both the constructs (2) and the total score (3). Furthermore, "strategy and resource allocation" received the second highest input with four constructs affected with a total score of 14 points while "risks and opportunities" got the second lowest input with two constructs affected and with a total score of six. In total, all the eight categories were affected, with 28 constructs affected and have a cumulative 75 points.

Ultimately, on the sixth stage, the suggestions and recommendations made by the Delphi panellists were factored into the Draft PAI. The last thing to be done by the Delphi panellists was to validate the PAI, i.e., to affirm the reasonableness and adequacy of the PAI categories and constructs and the adequacy of the scores allocated per construct. Categories, constructs and weights of the final PAI are presented in Table 6.5 while the abridged version of the final PAI is contained in Table 6.6.

Table 6.5: PAI Categories, Constructs and Weights

Category	Number of constructs	Total score	Weight calculation	Weight %
1. Organisational overview and external environment	6	25	25/152 X 100	16.45
2. Governance	6	18	18/152 X 100	11.84
3. Business model	4	17	17/152 X 100	11.18
4. Risks and opportunities	4	14	14/152 X 100	9.21
5. Strategy and resource allocation	7	25	25/152 X 100	16.45
6. Performance	6	23	23/152 X 100	15.13
7. Outlook	4	11	11/152 X 100	7.24
8. Basis of preparation and presentation	7	19	19/152 X 100	12.50
	44	**152**	**152/152 X 100**	**100**

The final PAI has 8 categories, 44 constructs, a total score of 152 points and 100% cumulative weight. "Organisational overview and external environment" (six constructs) and "strategy and resource allocation" (seven constructs) contribute the highest weights of 16.45% each respectively, while "outlook" has the lowest weight contribution of 7.24% with four constructs. The remaining six constructs have weights, which range between 9.21% and 15.13%.

As argued in section 5.3.1.1, some categories of information have more disclosure items compared to other categories therefore the accountability index implicitly weights information categories differently (Singleton & Globerman, 2002:99). The scores per construct were determined after critically factoring in the comments, suggestions and recommendations made by the Delphi Inquiry panellists. As such, the final abridged PAI is presented below in Table 6.6 (see Appendix A2 for the detailed PAI).

Table 6.6: Polychotomous Accountability Index (Abridged version)

1. ORGANISATIONAL OVERVIEW AND EXTERNAL ENVIRONMENT	Total
Construct	**25**
1.1. Mission/ purpose and vision/ambition	3
1.2. Culture, value and ethics/philosophy	2
1.3. Ownership and operating structure	2
1.4. Competitive landscape, market positioning and positioning within value chain	6
1.5. Key quantitative information	4
1.6. Operation context	8

2. GOVERNANCE	Total
Construct	**18**
2.1. Leadership structure	2
2.2. Governance and strategic decisions – actions undertaken to monitor and influence strategic direction and risk management	4
2.3. Reflection of organisational culture, ethics and values in use of and effect on capitals, relationship with key stakeholders	3
2.4. Governance practices exceed legal requirements	2
2.5. Promotion and enabling of innovation	3
2.6. Link between remuneration (incentives), and value creation in the short, medium and long term; link between remuneration (incentives), and organisation's use of and effects on capitals	4

3. BUSINESS MODEL	Total
Construct	**17**
3.1 Major variables of the business model	7
3.2 Narrative flow of the business model	2
3.3 Stakeholder dependencies	4
3.4 Connectivity between business model and other content elements	4

4. RISKS AND OPPORTUNITIES	Total
Construct	**14**
4.1. Major risks including Key Risk Indicators (KRIs)	4
4.2. Major opportunities	4
4.3. Assessment of the likelihood of occurrence of risk or opportunity and magnitude of effects	4
4.4. Steps to mitigate/manage risk or capitalise on the opportunity	2

Table 6.6 continued

5. STRATEGY AND RESOURCE ALLOCATION		Total
Construct		**25**
5.1.	Strategic objectives	4
5.2.	Strategy implementation plan as per business model	3
5.3.	Resource allocation plan as per business model	4
5.4.	Measurement criteria for achievements and target outcomes in the short, medium and long term	4
5.5.	Competitive advantage as influenced by innovation, intellectual capital, environmental and social considerations	4
5.6.	Stakeholder consultations performed in formulating strategy and resource allocation plan	3
5.7.	Link between strategy and information from other content elements	3

6. PERFORMANCE		Total
Construct		**23**
6.1	Key Performance Indicators (KPIs)	4
6.2	Explanation of KPIs	5
6.3	Entity's effects on capitals	4
6.4	Stakeholder relationships	3
6.5	Past, current and future performance	3
6.6	Connectivity and financial	4

7. OUTLOOK		Total
Construct		**11**
7.1	Expected changes	3
7.2	Potential implications	3
7.3	Organisational readiness	2
7.4	Estimates	3

8. BASIS OF PREPARATION AND PRESENTATION		TOTAL
Construct		**19**
8.1.	Materiality determination process	4
8.2.	Frameworks and methods used in the materiality determination process	2
8.3.	Reporting boundary	3
8.4.	Conciseness and linkages	2
8.5.	Reliability	3
8.6.	Responsibility for an IAR	2
8.7.	Transformation	3

As noted above, the final PAI has eight categories, with 44 constructs and a total score of 152 points, and with a cumulative 100% weighting. All other constructs are applicable to other jurisdictions except for two, which are only applicable in South Africa. The first is the BBBEE level, which belongs to the "key quantitative construct" belonging to the "organisational overview and external environment" category. This

measures the degree with which organisations are complying with the BBBEE legislation. An outsider in the form of a service provider evaluates how a particular entity complies with the BBBEE benchmarks. "Transformation" is the other construct, which is housed in the "basis of preparation and presentation" category. This relates to how an organisation evaluates itself on how far it has fared in terms of addressing the effects of apartheid by uplifting the formerly disadvantaged members of society.

One may use the PAI by comparing an IAR to the PAI. This comparison is performed against all the constructs of the PAI. The quality and extent of disclosure were captured across a six-point ordinal scoring system from "0" up to "5". To calculate the IRQ score, the total actual score (as disclosed by a particular entity) is divided by 152 and multiplied by 100% (Total actual score/152 X 100). The result becomes the IRQ score for that particular company. Having addressed Objective 1, attention will now be turned to Objective 2, which is addressed below.

6.3 Objective 2 addressed (stage one): IRQ for individual companies – 2013 to 2016

The second objective is "To investigate the feasibility and practicability of applying the PAI to selected JSE listed companies over the period 2013 to 2016". This objective was addressed in four stages. Stage 1 is the presentation of PAI testing results in Table 6.7 to Table 6.15. There was a commentary after each table. Stage 1 was concluded by a comparative analysis of any trends over the four-year period.

In the second stage, results were analysed according to the JSE sector classifications. The "sector" column below in Table 6.15 to Table 6.20 refers to the sector in which the respective company belongs according to the JSE sector identification codes. In other words, all JSE sector related results are found in stage two.

The third stage is when results are analysed according to the industry sector classifications where ultimately some statistical non-parametric tests were conducted. The industry column in Tables 6.21 to Table 6.26 below represents the industry in which the respective company belongs according to industry classifications. The PAI was tested on 400 IARs, which span over a four-year period mentioned above and the results are presented below. Results presented below are an indicator of the degree to which JSE listed companies have integrated their IARs.

The degree of integration for IARs was computed as a percentage and companies were ranked in descending order from the highest IRQ score to the lowest IRQ score. Since this was manual coding, the scores per construct per company were captured on an excel spreadsheet. This exercise was done per construct, per IAR for all the 100 IARs over the four-year period. The four spreadsheets were transferred to SPSS for statistical analysis. The IRQ scores calculated in the spreadsheets are presented below. Lastly, nonparametric test results are presented.

The first one to be presented is Table 6.7, which has the mean annual IRQ scores for 100 IARs belonging to the 2013 sampled JSE listed companies. Furthermore, Table 6.8 shows the descriptive statistics of the IRQ scores for 2013.

Table 6.7: IRQ scores for 2013

RANK	COMPANY NAME	<IR> SCORE%	SECTOR	INDUSTRY
1	Exxaro Resources Ltd	66.447368	Oil & Gas Producers	Electricity, gas & water supply
2	Tsogo Sun Holdings Ltd	64.473684	Travel & Leisure	Community, social & personal service
3	Redefine Properties Ltd	63.815789	Real Estate Investment Trusts	Finance & other personal services
4	Adcock Ingram Holdings Ltd	63.157895	Pharmaceuticals & Biotechnology	Community, social & personal service
5	Oceana Group Ltd	63.157895	Food Producers	Agricultural
6	Sanlam Ltd	62.5	Life Insurance	Finance & other personal services
7	JSE Ltd	61.842105	General Financial	Finance & other personal services
8	MMI Holdings Ltd	61.842105	Life Insurance	Finance & other personal services
9	The Foschini Group Ltd	61.842105	General Retailers	Trade
10	Cash build Ltd	61.842105	General Retailers	Trade
11	Woolworths Holdings Ltd	61.842105	General Retailers	Trade
12	Lewis Group Ltd	61.184211	General Retailers	Trade
13	Tiger Brands Ltd	61.184211	Food Producers	Manufacturing
14	The Spar Group Ltd	61.184211	Food & Drug Retailers	Trade
15	Omnia Holdings Ltd	61.184211	Chemicals	Manufacturing
16	Mr Price Group Limited	61.184211	General Retailers	Trade
17	Hudaco Industries Ltd	60.526316	Support Services	Trade
18	Hyprop Investments Ltd	60.526316	Real Estate Investment Trusts	Finance & other personal services
19	Datatec Ltd	60.526316	Technology Hardware & Equipment	Transport, storage & communication
20	Netcare Ltd	60.526316	Health Care Equipment & Services	Community, social & personal service
21	Kumba Iron Ore Ltd	60.526316	Industrial Metals & Mining	Mining & quarrying
22	Spur Corporation Ltd	60.526316	Travel & Leisure	Community, social & personal service
23	MiX Telematics Ltd	60.526316	Support Services	Transport, storage & communication

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Table 6.7   (continued)

RANK	COMPANY NAME	<IR> SCORE%	SECTOR	INDUSTRY
24	Nedbank Group Ltd	59.868421	Banks	Finance & other personal services
25	Assore Ltd	59.868421	Industrial Metals & Mining	Mining & quarrying
26	Mondi PLC	59.868421	General Industrials	Manufacturing
27	City Lodge Hotels Ltd	59.210526	Travel & Leisure	Community, social & personal service
28	Hospitality Property Fund Ltd	59.210526	Real Estate Investment Trusts	Finance & other personal services
29	Liberty Holdings Ltd	59.210526	Life Insurance	Finance & other personal services
30	Emira Property Fund	59.210526	Real Estate Investment Trusts	Finance & other personal services
31	Santam Ltd	59.210526	Life Insurance	Finance & other personal services
32	SABMiller PLC	59.210526	Beverages	Manufacturing
33	BHP Billiton PLC	58.552632	Industrial Metals & Mining	Mining & quarrying
34	Country Bird Holdings Ltd	58.552632	Food Producers	Manufacturing
35	Steinhoff International Holdings Ltd	58.552632	Personal Goods	Trade
36	Imperial Holdings Ltd	58.552632	General Retailers	Trade
37	Aspen Pharmacare Holdings Ltd	58.552632	Pharmaceuticals & Biotechnology	Community, social & personal service
38	Old Mutual PLC	57.894737	Life Insurance	Finance & other personal services
39	Pioneer Food Group Ltd	57.894737	Food Producers	Manufacturing
40	MTN Group Ltd	57.236842	Mobile Telecommunications	Transport, storage & communication
41	Massmart Holdings Ltd	57.236842	Food & Drug Retailers	Trade
42	KAP Industrial Holdings Ltd	57.236842	General Industrials	Manufacturing
43	Growth Point Properties Ltd	56.578947	Real Estate Investment Trusts	Finance & other personal services
44	Remgro Ltd	56.578947	General Financial	Finance & other personal services
45	Mediclinic International Ltd	56.578947	Health Care Equipment & Services	Community, social & personal service
46	Nampak Ltd	55.921053	General Industrials	Manufacturing

Table 6.7   (continued)

RANK	COMPANY NAME	<IR> SCORE%	SECTOR	INDUSTRY
47	Afrimat Ltd	55.921053	Construction & Materials	Construction
48	Pan African Resources PLC	55.921053	Industrial Metals & Mining	Mining & quarrying
49	Howden Africa Holdings Ltd	55.921053	Industrial Engineering	Manufacturing
50	Brait Societas Europaea	54.605263	General Financial	Finance & other personal services
51	Truworths International Ltd	54.605263	General Retailers	Trade
52	Phumelela Gaming & Leisure Ltd	53.289474	Travel & Leisure	Community, social & personal service
53	Vukile Property Fund Ltd	53.289474	Real Estate Investment Trusts	Finance & other personal services
54	Discovery Ltd	53.289474	Life Insurance	Finance & other personal services
55	Clicks Group Ltd	53.289474	Food & Drug Retailers	Trade
56	Metrofile Holdings Ltd	53.289474	Software & Computer Services	Transport, storage & communication
57	Octodec Investments Ltd	52.631579	Real Estate Investment Trusts	Finance & other personal services
58	ARB Holdings Ltd	52.631579	Support Services	Trade
59	SA Corporate Real Estate Fund	51.973684	Real Estate Investment Trusts	Finance & other personal services
60	Distell Group Ltd	51.315789	Beverages	Manufacturing
61	Naspers Ltd	51.315789	Media	Community, social & personal service
62	Metair Investments Ltd	51.315789	Automobiles & Parts	Manufacturing
63	Value Group Ltd	50.657895	Travel & Leisure	Community, social & personal service
64	AVI Ltd	50.657895	Food Producers	Manufacturing
65	Tongaat Hulett Ltd	50	Food Producers	Manufacturing
66	Premium Properties Ltd	50	Real Estate Investment Trusts	Finance & other personal services
67	Ellies Holdings Ltd	50	Technology Hardware & Equipment	Manufacturing
68	Resilient Property Income Fund Ltd	49.342105	Real Estate Investment Trusts	Finance & other personal services
69	Italtile Ltd	49.342105	General Retailers	Trade
70	Famous Brands Ltd	49.342105	Travel & Leisure	Community, social & personal service
71	Fountainhead Property Trust	48.684211	Real Estate Investment Trusts	Finance & other personal services

Table 6.7   (continued)

RANK	COMPANY NAME	<IR> SCORE%	SECTOR	INDUSTRY
72	Combined Motor Holdings Ltd	48.684211	General Retailers	Trade
73	AECI Ltd	48.026316	Chemicals	Trade
74	Kagiso Media Ltd	48.026316	Media	Community, social & personal service
75	Capitec Bank Holdings Ltd	48.026316	Banks	Finance & other personal services
76	Acucap Properties Ltd	47.368421	Real Estate Investment Trusts	Finance & other personal services
77	Capital Property Fund	47.368421	Real Estate Investment Trusts	Finance & other personal services
78	Invicta Holdings Ltd	46.710526	Support Services	Trade
79	Delta EMD Ltd	46.052632	Electronic & Electrical Equipment	Manufacturing
80	ADvTECH Ltd	45.394737	General Retailers	Community, social & personal service
81	Sycom Property Fund	45.394737	Real Estate Investment Trusts	Finance & other personal services
82	Grand Parade Investments Ltd	45.394737	Travel & Leisure	Community, social & personal service
83	ELB Group Ltd	45.394737	Support Services	Trade
84	The Bidvest Group Ltd	44.736842	General Retailers	Trade
85	Clientele Ltd	44.736842	Life Insurance	Finance & other personal services
86	Brimstone Investment Corporation Ltd	43.421053	General Financial	Finance & other personal services
87	Trencor Ltd	42.105263	Industrial Transportation	Trade
88	EOH Holdings Ltd	39.473684	Software & Computer Services	Transport, storage & communication
89	RMB Holdings Ltd	38.157895	General Financial	Finance & other personal services
90	Shoprite Holdings Ltd	38.157895	Food & Drug Retailers	Trade
91	Firstrand Ltd	37.5	General Financial	Finance & other personal services
92	Hosken Consolidated Investments Ltd	36.184211	General Industrials	Trade
93	Coronation Fund Managers Ltd	34.868421	General Financial	Finance & other personal services
94	Compagnie Financiere Richemont SA	34.210526	Personal Goods	Trade

Table 6.7 (continued)

RANK	COMPANY NAME	<IR> SCORE%	SECTOR	INDUSTRY
95	Zeder Investments Ltd	33.552632	General Financial	Finance & other personal services
96	Pinnacle Technology Holdings Ltd	33.552632	Technology Hardware & Equipment	Transport, storage & communication
97	Foord Unit Trusts Ltd	32.236842	General Financial	Finance & other personal services
98	Bowler Metcalf Ltd	30.921053	Chemicals	Manufacturing
99	PSG Group Ltd	30.263158	General Financial	Finance & other personal services
100	Uranium One Incorporated	23.684211	Mining	Mining & quarrying

Table 6.8: Descriptive statistics for 2013

Mean	52.45395
Standard Error	0.917526
Median	54.60526
Mode	60.52632
Standard Deviation	9.175264
Sample Variance	84.18547
Kurtosis	0.371276
Skewness	-0.97777
Range	42.76316
Minimum	23.68421
Maximum	66.44737
Sum	5245.395
Count	100
Largest(1)	66.44737
Smallest(1)	23.68421
Confidence Level (95.0%)	1.820571

As shown in Table 6.7 and Table 6.8, the average (mean) IRQ for the sampled companies in 2013 is 52.45%. The highest IRQ score is 66.47% while the lowest IRQ score is 23.68%. These scores are relatively higher compared to Zhou et al. (2016)

who find an average IRQ of 20.23% with the lowest IRQ score of 0.64% while the highest IRQ is 58%. The results from this study are slightly higher than those of Haji and Anifowose (2016) who find a mean IRQ of 50.16% and the lowest score of 15.38%. However, the highest IRQ score from this study (66.47%) is lower than that of Haji and Anifowose (2016:206) who find a score of 69.87%. One may therefore infer that results from this study are within a range found by other scholars.

The notable differences between the two studies (this study and that of Zhou et al. 2016) might be because of the mandating of <IR> in South Africa, which saw IRQ scores in the current study improving rapidly. It may also be because of a general improvement in the quality of reporting by JSE listed companies, as they gained more experience due to several years of practice in producing IARs. Lastly, the differences may be due to the differences in the number of companies in the sample; in the current study it is data for one year (100 companies), whereas in Zhou et al. (2016), the data is for four years (2009–2012), which ultimately translates to 443 companies.

Proceeding with the results from this study, 67% of companies attained IRQ scores between 50% and 66.47%. While 33% of the companies attained IRQ scores, which are below 50% i.e. scores between 23.68% and 49.34%. This means that 33% of companies produced poor quality reports. The most common (mode) IRQ score is 60.53% while 54.61% is the median (middle) IRQ score of the 2013 data.

This level of integration is cautiously satisfactory taking into consideration that the <IR> framework was only released in the same year (December 2013). Therefore, companies were using their own individualised frameworks that, in some cases, lacked facts and detail. Therefore <IR> was implemented with very little guidance despite <IR> having been mandated in 2010 by the JSE. To a lesser extent though, the researcher argues that companies could have done more in terms of integration because this was the third year since the JSE mandated preparation of IARs by JSE listed companies since 2010. It is considered a reasonable expectation that, over a three-year period, a company should have a workable <IR> framework in place, expertise and all the required systems in order to produce high quality IARs. This is the basis upon which the researcher expected the companies to have done more. Having dealt with 2013 IRQ scores, attention is turned to 2014 IRQ scores in Table

6.9, that shows the IRQ scores for 2014, and Table 6.10 that shows the descriptive statistics for 2014's IRQ scores.

Table 6.9: IRQ scores for 2014

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
1	Woolworths Holdings Ltd	73.684211	General Retailers	Trade
2	The Foschini Group Ltd	73.026316	General Retailers	Trade
3	Oceana Group Ltd	72.368421	Food Producers	Agricultural
4	MTN Group Ltd	71.052632	Mobile Telecommunications	Transport, storage & communication
5	Spur Corporation Ltd	71.052632	Travel and Leisure	Community, social & personal services
6	Metair Investments Ltd	71.052632	Automobiles & Parts	Manufacturing
7	Liberty Holdings Ltd	70.394737	Life Insurance	Finance & other business activities
8	Sanlam Ltd	70.394737	Life Insurance	Finance & other business activities
9	Mr Price Group Ltd	70.394737	General Retailers	Trade
10	Nampak Ltd	69.736842	General Industrials	Manufacturing
11	Howden Africa Holdings Ltd	69.736842	Industrial Engineering	Manufacturing
12	Afrimat Ltd	69.736842	Construction & Materials	Construction
13	Nedbank Group Ltd	69.078947	Banks	Finance & other business activities
14	Mondi PLC	69.078947	General Industrials	Manufacturing
15	Hyprop Investments Ltd	68.421053	Real Estate Investment Trusts	Finance & other business activities
16	Old Mutual PLC	68.421053	Life Insurance	Finance & other business activities
17	British American Tobacco PLC	68.421053	Tobacco	Manufacturing
18	Mustek Ltd	68.421053	Technology Hardware & Equipment	Transport, storage & communication
19	Mediclinic International Ltd	68.421053	Health Care Equipment & Services	Community, social & personal services

Table 6.9   (continued)

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
20	Naspers Ltd	68.421053	Media	Community, social & personal services
21	Sasol Ltd	67.763158	Oil & Gas Producers	Electricity, gas & water supply
22	Vodacom Group Ltd	67.763158	Mobile Telecommunications	Transport, storage & communication
23	SABMiller PLC	67.763158	Beverages	Manufacturing
24	Truworths International Ltd	67.105263	General Retailers	Trade
25	Pioneer Foods Group Ltd	67.105263	Food Producers	Manufacturing
26	MMI Holdings Ltd	66.447368	Life Insurance	Finance & other business activities
27	Discovery Ltd	66.447368	Life Insurance	Finance & other business activities
28	MIX Telematics Ltd	66.447368	Support Services	Transport, storage & communication
29	Aspen Pharmacare Holdings Ltd	66.447368	Pharmaceuticals & Biotechnology	Community, social & personal services
30	City Lodge Hotels Ltd	65.789474	Travel and Leisure	Community, social & personal services
31	Redefine Properties Ltd	65.789474	Real Estate Investment Trusts	Finance & other business activities
32	The Spar Group Ltd	65.789474	Food & Drug Retailers	Trade
33	Omnia Holdings Ltd	65.789474	Chemicals	Manufacturing
34	Famous Brands Ltd	65.789474	Travel and Leisure	Community, social & personal services
35	JSE Ltd	65.131579	General Financial	Finance & other business activities
36	Barloworld Ltd	65.131579	Support Services	Trade
37	Netcare Ltd	65.131579	Health Care Equipment & Services	Community, social & personal services
38	Wescoal Holdings Ltd	64.473684	Support Services	Mining & quarrying
39	Clicks Group Ltd	64.473684	Food & Drug Retailers	Trade
40	Super Group Ltd	64.473684	General Retailers	Trade
41	Steinhoff International Holdings Ltd	64.473684	Personal Goods	Trade
42	Assore Ltd	63.815789	Industrial Metals & Mining	Mining & quarrying
43	Octodec Investments Ltd	63.815789	Real Estate Investment Trusts	Finance & other business activities
44	Cashbuild Ltd	63.157895	General Retailers	Trade

Table 6.9   (continued)

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
45	Italtile Ltd	62.5	General Retailers	Trade
46	Hudaco Industries Ltd	61.842105	Support Services	Trade
47	Coronation Fund Managers Ltd	61.842105	General Financial	Finance & other business activities
48	Tongaat Hulett Ltd	61.184211	Food Producers	Manufacturing
49	Investec PLC	60.526316	General Financial	Finance & other business activities
50	Tiger Brands Ltd	60.526316	Food Producers	Manufacturing
51	EOH Holdings Ltd	60.526316	Software & Computer Services	Transport, storage & communication
52	Imperial Holdings Ltd	59.868421	General Retailers	Trade
53	SA Corporate Real Estate Fund	59.868421	Real Estate Investment Trusts	Finance & other business activities
54	Consolidated Infrastructure Group Ltd	59.868421	Construction & Materials	Construction
55	Santam Ltd	59.210526	Non-life Insurance	Finance & other business activities
56	Capitec Bank Holdings Ltd	59.210526	Banks	Finance & other business activities
57	Astral Foods Ltd	58.552632	Food Producers	Manufacturing
58	ADvTECH Ltd	58.552632	General Retailers	Community, social & personal services
59	The Bidvest Group Ltd	58.552632	General Industrials	Trade
60	Pan African Resources PLC	58.552632	Industrial Metals & Mining	Mining & quarrying
61	Remgro Ltd	58.552632	General Financial	Finance & other business activities
62	Peregrine Holdings Ltd	58.552632	General Financial	Finance & other business activities
63	Growth Point Properties Ltd	57.894737	Real Estate Investment Trusts	Finance & other business activities
64	Firstrand Ltd	57.894737	General Financial	Finance & other business activities
65	Resilient Property Income Fund Ltd	57.894737	Real Estate Investment Trusts	Finance & other business activities
66	Grand Parade Investments Ltd	57.894737	Travel and Leisure	Community, social & personal services
67	AVI Ltd	57.894737	Food Producers	Manufacturing
68	Vukile Property Fund Ltd	57.236842	Real Estate Investment Trusts	Finance & other business activities

Table 6.9   (continued)

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
69	Hospitality Property Fund Ltd	56.578947	Real Estate Investment Trusts	Finance & other business activities
70	Pinnacle Holdings Ltd	56.578947	Technology Hardware & Equipment	Transport, storage & communication
71	AECI Ltd	55.921053	Chemicals	Trade
72	Datatec Ltd	55.263158	Technology Hardware & Equipment	Transport, storage & communication
73	Emira Property Fund	54.605263	Real Estate Investment Trusts	Finance & other business activities
74	Litha Health Group Ltd	54.605263	Pharmaceuticals & Biotechnology	Community, social & personal services
75	Phumelela Gaming and Leisure Ltd	53.947368	Travel and Leisure	Community, social & personal services
76	Comair Ltd	53.947368	Travel and Leisure	Community, social & personal services
77	Capital property Fund Ltd	53.947368	Real Estate Investment Trusts	Finance & other business activities
78	Brait Societas Europaea	51.973684	General Financial	Finance & other business activities
79	ARB Holdings Ltd	50.657895	Support Services	Trade
80	Brimstone Investment Corporation Ltd	50.657895	General Financial	Finance & other business activities
81	RMB Holdings Ltd	50.000000	General Financial	Finance & other business activities
82	Invicta Holdings Ltd	50.000000	Support Services	Trade
83	SacOil Holdings Ltd	47.368421	Oil & Gas Producers	Electricity, gas & water supply
84	Conduit Capital Ltd	47.368421	Non-life Insurance	Finance & other business activities
85	KAP Industrial Holdings Ltd	46.710526	General Industrials	Manufacturing
86	ELB Group Ltd	44.736842	Support Services	Trade
87	Nu-World Holdings Ltd	44.078947	Household Goods & Home Construction	Trade
88	Trencor Ltd	42.105263	Industrial Transportation	Trade
89	Metrofile Holdings Ltd	41.447368	Software & Computer Services	Transport, storage & communication
90	Shoprite Holdings Ltd	40.789474	Food & Drug Retailers	Trade

Table 6.9 (continued)

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
91	New Europe Property Investments PLC	40.131579	Real Estate Investment & Services	Finance & other business activities
92	Sycom Property Fund Managers Ltd	38.815789	Real Estate Investment Trusts	Finance & other business activities
93	Hosken Consolidated Investments Ltd	38.157895	General Industrials	Trade
94	Clientele Ltd	36.184211	Life Insurance	Finance & other business activities
95	Compagnie Financiere Richemont SA	34.210526	Personal Goods	Trade
96	Zeder Investments Ltd	33.552632	General Financial	Finance & other business activities
97	PSG Group Ltd	33.552632	General Financial	Finance & other business activities
98	Acucap Properties Ltd	30.921053	Real Estate Investment Trusts	Finance & other business activities
99	Capevin Holdings Ltd	29.605263	Beverages	Manufacturing
100	Reinet Investments SCA	26.973684	General Financial	Finance & other business activities

Table 6.10: Descriptive statistics for 2014

Mean	58.48026
Standard Error	1.110748
Median	60.52632
Mode	68.42105
Standard Deviation	11.10748
Sample Variance	123.3762
Kurtosis	0.390863
Skewness	-1.05066
Range	46.71053
Minimum	26.97368
Maximum	73.68421
Sum	5848.026
Count	100
Largest(1)	73.68421
Smallest(1)	26.97368
Confidence Level (95.0%)	2.203966

The average IRQ for the sampled companies in 2014 is 58.48%. The highest IRQ score is 73.68% while the lowest IRQ score is 26.97%. Eight-two percent of companies attained IRQ scores, which are between 50% and 73.68% while 18% of the companies attained IRQ scores, which are below 50%, i.e. scores between 26.97% and 47.37%. Out of the 100 companies selected for 2014, 18% of the companies produced poor quality reports. The modal IRQ score is 68.42% while 60.53% is the median IRQ score of the 2014 data.

These results are relatively are low compared to those by Stent and Dowler (2015) who find an average IRQ score of 78.5% for entities in New Zealand. The results might be in favour of New Zealand because of the differences in sample sizes as Stent and Dowler (2015) examined eight companies as compared to 100 examined in this study. These results raise a question on whether mandating <IR> will improve compared to voluntary adoption of <IR>. Higher compliance levels were expected in South Africa where <IR> is mandatory unlike in New Zealand where <IR> is voluntary.

This raises questions on the effectiveness of the South African <IR> monitoring authorities. The low compliance levels may be because of ineffective monitoring on the <IR> processes or because of the ceremonial manner with which companies prepare their IARs. This means that companies target meeting only the minimum <IR> requirements and do not adopt any creative innovations to disclose <IR> beyond these minimum requirements.

Perhaps the difference in the average IRQ scores is due to the structural differences in the PAI used in this study, and the dichotomous index used by Dowler and Stent (2015). It can be argued that the dichotomous index does not capture the quality of disclosure and therefore likely to produce higher IRQ scores as compared to a PAI which is likely to lower the IRQ scores due to the quality element that is captured.

Table 6.11 and Table 6.12 below show the IRQ scores and the respective descriptive statistics of the 100 JSE listed companies' IARs for 2015.

Table 6.11: IRQ scores for 2015

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
1	Nedbank Group Ltd	78.94736842	Banks	Finance & other business services
2	Netcare Ltd	78.28947368	Health Care Equipment & Services	Community, social & personal services
3	Metair Investments Ltd	75.00000000	Automobiles & Parts	Trade
4	The Foschini Group Ltd	75.00000000	General Retailers	Trade
5	Mr Price Group Ltd	74.34210526	General Retailers	Trade
6	Redefine Properties Ltd	74.34210526	Real Estate Investment Trusts	Construction
7	Aspen Pharmacare Holdings Ltd	73.68421053	Pharmaceuticals & Biotechnology	Community, social & personal services
8	Life Healthcare Group Holdings Ltd	73.68421053	Health Care Equipment & Services	Community, social & personal services
9	Mustek Ltd	73.68421053	Technology Hardware & Equipment	Trade
10	Cashbuild Ltd	73.02631579	General Retailers	Trade
11	Spur Corporation Ltd	73.02631579	Travel & Leisure	Community, social & personal services
12	Vodacom Group Ltd	73.02631579	Mobile Telecommunications	Transport, storage & communication
13	Barloworld Ltd	73.02631579	Support Services	Trade
14	Nampak Ltd	73.02631579	General Industrials	Manufacturing
15	Afrocentric Investment Corporation Ltd	72.36842105	General Financial	Finance & other business services
16	Clicks Group Ltd	72.36842105	Food and Drug Retailers	Trade
17	The Spar Group Ltd	72.36842105	Food and Drug Retailers	Trade
18	Discovery Ltd	71.71052632	Life Insurance	Finance & other business services
19	Oceana Group Ltd	71.71052632	Food Producers	Agricultural
20	Omnia Holdings Ltd	71.71052632	Chemicals	Manufacturing
21	Growthpoint Properties Ltd	71.71052632	Real Estate Investment Trusts	Finance & other business services
22	Telkom SA SOC Ltd	71.71052632	Fixed Line Telecommunications	Transport, storage & communication
23	Super Group Ltd	71.05263158	General Retailers	Trade

Table 6.11 continued

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
24	Woolworths Holdings Ltd	71.05263158	General Retailers	Trade
25	Metrofile Holdings Ltd	71.05263158	Software & Computer Services	Transport, storage & communication
26	Brimstone Investment Corporation Ltd	71.05263158	General Financial	Finance & other business services
27	City Lodge Hotels Ltd	71.05263158	Travel & Leisure	Community, social & personal services
28	Hudaco Industries Ltd	71.05263158	Support Services	Trade
29	Taste Holdings Ltd	70.39473684	Travel & Leisure	Community, social & personal services
30	Capitec Bank Ltd	70.39473684	Banks	Finance & other business services
31	SABMiller PLC	70.39473684	Beverages	Manufacturing
32	Astral Foods Ltd	70.39473684	Food Producers	Manufacturing
33	Coronation Fund Managers Ltd	69.73684211	General Financial	Finance & other business services
34	Mondi PLC	69.73684211	General Industrials	Agricultural
35	RMB Holdings Ltd	69.73684211	General Financial	Finance & other business services
36	Sanlam Ltd	69.73684211	Life Insurance	Finance & other business services
37	JSE Ltd	69.73684211	General Financial	Finance & other business services
38	MMI Holdings Ltd	69.73684211	Life Insurance	Finance & other business services
39	Pioneer Food Group Ltd	69.07894737	Food Producers	Manufacturing
40	Howden Africa Holdings Ltd	69.07894737	Industrial Engineering	Manufacturing
41	Distell Group Ltd	69.07894737	Beverages	Manufacturing
42	Blue Label Telecoms Ltd	69.07894737	Support Services	Transport, storage & communication
43	Pan African Resources PLC	69.07894737	Industrial Metals & Mining	Mining & quarrying
44	Intu Properties PLC	69.07894737	Real Estate Investment Trusts	Finance & other business services
45	Consolidated Infrastructure Group Ltd	68.42105263	Construction & Materials	Construction

Table 6.11 continued

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
46	Resilient Property Income Fund Ltd	68.42105263	Real Estate Investment Trusts	Finance & other business services
47	British American Tobacco PLC	68.42105263	Tobacco	Manufacturing
48	Hyprop Investments Ltd	68.42105263	Real Estate Investment Trusts	Finance & other business services
49	Old Mutual PLC	68.42105263	Life Insurance	Finance & other business services
50	Octodec Investments Ltd	68.42105263	Real Estate Investment Trusts	Finance & other business services
51	Afrimat Ltd	67.76315789	Construction & Materials	Construction
52	Famous Brands Ltd	67.76315789	Travel & Leisure	Community, social & personal services
53	KAP Industrial Holdings Ltd	67.76315789	General Industrials	Manufacturing
54	Santam Ltd	67.76315789	Non-life Insurance	Finance & other business services
55	Mediclinic International Ltd	67.10526316	Health Care Equipment & Services	Community, social & personal services
56	ADvTECH Ltd	67.10526316	General Retailers	Community, social & personal services
57	Transpaco Ltd	67.10526316	General Industrials	Manufacturing
58	Imperial Holdings Ltd	67.10526316	General Retailers	Trade
59	EOH Holdings Ltd	66.44736842	Software & Computer Services	Trade
60	Naspers Ltd	66.44736842	Media	Community, social & personal services
61	Remgro Ltd	66.44736842	General Financial	Finance & other business services
62	Datatec Ltd	66.44736842	Technology Hardware & Equipment	Transport, storage & communication
63	Emira Property Fund Ltd	66.44736842	Real Estate Investment Trusts	Finance & other business services
64	Capital Property Fund Ltd	65.78947368	Real Estate Investment Trusts	Finance & other business services
65	SA Corporate Real Estate Ltd	65.78947368	Real Estate Investment Trusts	Finance & other business services

Table 6.11 continued

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
66	OneLogix Group Ltd	65.13157895	Industrial Transportation	Trade
67	Liberty Holdings Ltd	65.13157895	Life Insurance	Finance & other business services
68	Trustco Group Holdings Ltd	64.47368421	General Financial	Finance & other business services
69	The Bidvest Group Ltd	64.47368421	General Industrials	Trade
70	Investec PLC	64.47368421	General Financial	Finance & other business services
71	Sephaku Holdings Ltd	63.81578947	Construction & Materials	Construction
72	Vukile Property Fund Ltd	63.81578947	Travel & Leisure	Community, social & personal services
73	Fortress Income Fund Ltd	63.15789474	Real Estate Investment Trusts	Finance & other business services
74	Firstrand Ltd	63.15789474	General Financial	Finance & other business services
75	Capital & Counties Properties PLC	62.50000000	Real Estate Investment & Services	Finance & other business services
76	Clientele Ltd	61.84210526	Life Insurance	Finance & other business services
77	Phumelela Gaming and Leisure Ltd	61.18421053	Travel & Leisure	Community, social & personal services
78	Italtile Ltd	60.52631579	General Retailers	Trade
79	Grand Parade Investments Ltd	60.52631579	Travel & Leisure	Community, social & personal services
80	Brait Societas Europaea	59.21052632	General Financial	Finance & other business services
81	Peregrine Holdings Ltd	59.21052632	General Financial	Finance & other business services
82	AVI Ltd	58.55263158	Food Producers	Manufacturing
83	Steinhoff International Holdings Ltd	57.89473684	Personal Goods	Trade
84	ELB Group Ltd	57.89473684	Support Services	Trade
85	ARB Holdings Ltd	55.92105263	Support Services	Trade
86	Combined Motor Holdings Ltd	55.26315789	General Retailers	Trade

Table 6.11 continued

RANK	COMPANY NAME	\<IR\> SCORE %	SECTOR	INDUSTRY
87	MiX Telematics Ltd	53.28947368	Support Services	Transport, storage & communication
88	New Europe Property Investment PLC	51.97368421	Real Estate Investment & Services	Finance & other business services
89	PSG Group Ltd	51.31578947	General Financial	Finance & other business services
90	Invicta Holdings Ltd	50.65789474	Support Services	Trade
91	Net 1 Ueps Technologies, Inc	48.68421053	Technology Hardware & Equipment	Transport, storage & communication
92	Pinnacle Holdings Ltd	48.68421053	Technology Hardware & Equipment	Transport, storage & communication
93	Shoprite Holdings Ltd	48.68421053	Food and Drug Retailers	Trade
94	Conduit Capital Ltd	46.05263158	Non-life Insurance	Finance & other business services
95	Reinet Investments SCA	40.78947368	General Financial	Finance & other business services
96	Hosken Consolidated Investments Ltd	40.78947368	General Industrials	Trade
97	Tradehold Ltd	36.18421053	Real Estate Investment & Services	Finance & other business services
98	Compagnie Financiere Richemont SA	34.21052632	Personal Goods	Trade
99	Sycom Property Fund Managers Ltd	30.92105263	Real Estate Investment Trusts	Finance & other business services
100	Zeder Investments Ltd	29.60526316	General Financial	Finance & other business services

Table 6.12: Descriptive statistics for 2015

Mean	64.72368421
Standard Error	1.008328902
Median	68.09210526
Mode	69.73684211
Standard Deviation	10.08328902
Sample Variance	101.6727175
Kurtosis	2.795169269
Skewness	-1.711590879
Range	49.34210526
Minimum	29.60526316
Maximum	78.94736842
Sum	6472.368421
Count	100
Largest(1)	78.94736842
Smallest(1)	29.60526316
Confidence Level (95.0%)	2.0007433

As presented in Table 6.11 and Table 6.12, the average IRQ for the sampled companies in 2015 is 64.72%. This is relatively high compared to 18.54% as calculated by Menicucci (2018) for 282 IARs, which were on the IIRC website as at that date. The difference may be because this study investigates <IR> in totality while Menicucci (2018) isolated only one construct of <IR>, namely, forward-looking information. The highest IRQ score is 78.95% while the lowest IRQ score is 29.61% compared to 17.9% and 33.83% respectively from Menicucci (2018). Moreover, 90% of companies attained IRQ scores between 50.66% and 78.95% and 10% of the companies attained IRQ scores, which are below 50%, i.e. scores between 29.61% and 48.68%. Out of the 100 companies selected for 2015, 10% of companies produced poor quality reports. The modal IRQ score is 69.74% while 68.09% is the median IRQ score of the 2015 sampled companies. Next to be presented are IRQ scores and the respective descriptive statistics for 2016 for the 100 JSE listed companies' IARs.

Table 6.13: IRQ scores for 2016

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
1	Sasol Ltd	88.8157895	Oil & Gas Producers	Electricity, gas & water supply
2	MTN Group Ltd	86.1842105	Mobile Telecommunications	Transport, storage & communication
3	Nedbank Group Ltd	83.5526316	Banks	Finance & business services
4	Barclays Africa Group Ltd	82.8947368	Banks	Finance & business services
5	Sappi Ltd	82.2368421	Forestry & Paper	Agricultural
6	Kumba Iron Ore Ltd	81.5789474	Industrial Metals & Mining	Mining & quarrying
7	AngloGold Ashanti Ltd	80.9210526	Mining	Mining & quarrying
8	Sanlam Ltd	80.2631579	Life Insurance	Finance & business services
9	Massmart Holdings Ltd	78.2894737	Food & Drug Retailers	Trade
10	Standard Bank Group Ltd	76.9736842	Banks	Finance & business services
11	Anglo American Platinum Ltd	76.9736842	Mining	Mining & quarrying
12	Clicks Group Ltd	76.9736842	Food & Drug Retailers	Trade
13	Telkom SA SOC Ltd	76.9736842	Fixed Line Telecommunications	Transport, storage & communication
14	Nampak Ltd	76.9736842	General Industrials	Manufacturing
15	Vodacom Group Ltd	76.3157895	Mobile Telecommunications	Transport, storage & communication
16	Aspen Pharmacare Holdings	76.3157895	Pharmaceuticals & Biotechnology	Community, social & personal services
17	Exxaro Resources Ltd	76.3157895	Oil & Gas Producers	Mining & quarrying
18	York Timbers Holdings Ltd	76.3157895	Forestry & Paper	Agricultural
19	Hyprop Investments Ltd	76.3157895	Real Estate Investment Trusts	Finance & business services
20	Tsogo Sun Holdings Ltd	76.3157895	Travel & Leisure	Community, social & personal services
21	BHP Billiton PLC	75.6578947	Industrial Metals & Mining	Mining & quarrying
22	Gold Fields Ltd	75.6578947	Mining	Mining & quarrying
23	African Rainbow Minerals Ltd	75.6578947	Industrial Metals & Mining	Mining & quarrying

Table 6.13 continued

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
24	Capitec Bank Holdings Ltd	75.0000000	Banks	Finance & business services
25	Redefine Properties Ltd	75.0000000	Real Estate Investment Trusts	Finance & business services
26	Netcare Ltd	75.0000000	Health Care Equipment & Services	Community, social & personal services
27	Dis-Chem Pharmacies Ltd	75.0000000	Food & Drug Retailers	Trade
28	Truworths International Ltd	74.3421053	General Retailers	Trade
29	The Foschini Group Ltd	74.3421053	General Retailers	Trade
30	The Spar Group Ltd	73.6842105	Food & Drug Retailers	Trade
31	Liberty Holdings Ltd	73.6842105	Life Insurance	Finance & business services
32	MMI Holdings Ltd	73.6842105	Life Insurance	Finance & business services
33	Impala Platinum Holdings Ltd	73.6842105	Mining	Mining & quarrying
34	Curro-Holdings Ltd	73.6842105	General Retailers	Community, social & personal services
35	Pioneer Foods Group Ltd	73.0263158	Food Producers	Manufacturing
36	Northam Platinum Ltd	73.0263158	Mining	Mining & quarrying
37	The Bidvest Group Ltd	72.3684211	General Industrials	Trade
38	Life Healthcare Group Holdings Ltd	72.3684211	Health Care Equipment & Services	Community, social & personal services
39	Barloworld Ltd	72.3684211	Support Services	Trade
40	Attaccq Ltd	72.3684211	Real Estate Investment & Services	Finance & business services
41	Hammerson PLC	71.7105263	Real Estate Investment Trusts	Finance & business services
42	Sibanye Gold Ltd	71.7105263	Mining	Mining & quarrying
43	Pick n Pay Stores Ltd	71.7105263	Food & Drug Retailers	Trade
44	Tongaat Hulett Ltd	71.0526316	Food Producers	Manufacturing
45	RCL Foods Ltd	71.0526316	Food Producers	Manufacturing
46	Steinhoff International Holdings N.V	70.3947368	Personal Goods	Trade
47	Old Mutual PLC	70.3947368	Life Insurance	Finance & business services
48	Intu Properties PLC	70.3947368	Real Estate Investment Trusts	Finance & business services

Table 6.13 continued

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
49	Mr Price Group Ltd	70.3947368	General Retailers	Trade
50	Afrimat Ltd	70.3947368	Construction & Materials	Construction
51	Imperial Holdings Ltd	70.3947368	General Retailers	Trade
52	Investec Ltd	70.3947368	General Financial	Finance & business services
53	Datatec Ltd	70.3947368	Technology Hardware & Equipment	Trade
54	EOH Holdings Ltd	70.3947368	Software & Computer Services	Trade
55	Anglo American PLC	69.7368421	Mining	Mining & quarrying
56	Mediclinic International PLC	69.7368421	Health Care Equipment & Services	Community, social & personal services
57	Steinhoff African Retail Ltd	69.7368421	General Retailers	Trade
58	Woolworths Holdings Ltd	69.7368421	General Retailers	Trade
59	Super Group Ltd	69.7368421	General Retailers	Trade
60	Acucap Properties Ltd	69.7368421	Real Estate Investment Trusts	Finance & business services
61	Rand Merchant Investment Holdings Ltd	69.0789474	Life Insurance	Finance & business services
62	Capital & Counties Properties PLC	69.0789474	Real Estate Investment & Services	Finance & business services
63	MAS Real Estate Inc	69.0789474	Real Estate Investment & Services	Finance & business services
64	Discovery Holdings Ltd	68.4210526	Life Insurance	Finance & business services
65	Tiger Brands Ltd	68.4210526	Food Producers	Manufacturing
66	Shoprite Holdings Ltd	67.7631579	Food & Drug Retailers	Trade
67	Assore Ltd	67.7631579	Industrial Metals & Mining	Mining & quarrying
68	Santam Ltd	67.7631579	Non-life Insurance	Finance & business services
69	Mondi PLC	67.1052632	General Industrials	Agricultural
70	RMB Holdings Ltd	67.1052632	General Financial	Finance & business services
71	Growth Point Properties Ltd	67.1052632	Real Estate Investment Trusts	Finance & business services
72	Echo Polska Properties N.V	67.1052632	Real Estate Investment & Services	Finance & business services

Table 6.13 continued

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
73	Howden Africa Holdings Ltd	66.4473684	Industrial Engineering	Manufacturing
74	Distell Group Ltd	65.1315789	Beverages	Trade
75	SA Corporate Real Estate Ltd	65.1315789	Real Estate Investment Trusts	Finance & business services
76	Coronation Fund Managers Ltd	64.4736842	General Financial	Finance & business services
77	Blue Label Telecoms Ltd	64.4736842	Support Services	Transport, storage & communication
78	South32 Ltd	63.1578947	Industrial Metals & Mining	Mining & quarrying
79	Greenbay Properties Ltd	63.1578947	General Financial	Finance & business services
80	Italtile Ltd	62.5	General Retailers	Trade
81	Investec PLC	61.8421053	General Financial	Finance & business services
82	Resilient REIT Ltd	61.8421053	Real Estate Investment Trusts	Finance & business services
83	AVI Ltd	59.8684211	Food Producers	Manufacturing
84	Vukile Property Fund Ltd	59.2105263	Real Estate Investment Trusts	Finance & business services
85	BID Corporation Ltd	58.5526316	Health Care Equipment & Services	Community, social & personal services
86	KAP Industrial Holdings Ltd	55.2631579	General Industrials	Manufacturing
87	Globe Trade Centre S.A	54.6052632	Real Estate Investment & Services	Finance & business services
88	British American Tobacco PLC	52.6315789	Tobacco	Manufacturing
89	Glencore Xstrata PLC	51.9736842	Mining	Mining & quarrying
90	Remgro Limited	51.9736842	General Financial	Finance & business services
91	Naspers Ltd	50.6578947	Media	Community, social & personal services
92	Brait Societas Europaea	50.6578947	General Financial	Finance & business services
93	Anheuser-Busch InBev SA/NV	49.3421053	Beverages	Manufacturing
94	Reinet Investments SCA	48.6842105	General Financial	Finance & business services
95	Oando PLC	48.6842105	Oil & Gas Producers	Electricity, gas & water supply
96	Fortress Income Fund Ltd	46.7105263	Real Estate Investment Trusts	Finance & business services
97	Firstrand Ltd	46.0526316	General Financial	Finance & business services
98	Nepi Rockcastle PLC	44.0789474	Real Estate Investment & Services	Finance & business services

Table 6.13 continued

RANK	COMPANY NAME	<IR> SCORE %	SECTOR	INDUSTRY
99	PSG Group Ltd	42.7631579	General Financial	Finance & business services
100	Compagnie Financiere Richemont SA	26.9736842	Personal Goods	Trade

Table 6.14: Descriptive statistics for 2016

Mean	68.28947
Standard Error	1.042951
Median	70.39474
Mode	70.39474
Standard Deviation	10.42951
Sample Variance	108.7747
Kurtosis	2.021779
Skewness	-1.22088
Range	61.84211
Minimum	26.97368
Maximum	88.81579
Sum	6828.947
Count	100
Largest(1)	88.81579
Smallest(1)	26.97368
Confidence Level (95.0%)	2.069442

The average IRQ for the sampled companies in 2016 is 68.29%. The highest IRQ score is 88.82%, while the lowest IRQ score is 26.97%. Ninety-two percent of companies attained IRQ scores between 50.66% and 88.82%. While 8% of the companies attained IRQ scores, which are below 50%, i.e. scores between 26.97% and 49.34%. Out of the 100 companies selected for 2016, 8% of companies produced poor quality reports. Both the modal IRQ score and the median are anchored at 70.39% for the 2016 sampled companies. While some companies are doing well,

others are still lagging behind. There is a possibility that the scandals that have affected the auditing profession in South Africa might be negatively affecting some companies' adherence to the <IR> framework because of poor quality work from the auditors (the researcher is cautious that only some of the audit firms were involved in the scandals).

The results from this study compare satisfactorily with those by Sofian and Dumitru (2017) as they are in the same range. Sofian and Dumitru (2017) find an average IRQ score of 76.39%, the lowest IRQ score of 53% and the highest IRQ score of 87%. The companies examined are from Western Europe particularly from France, Italy, Netherlands and Switzerland. The likely explanation for such a similarity is because of <IR> mandating which ultimately contributed to the improvement in the quality of IARs. Comparative analysis between 2013, 2014, 2015 and 2016 data is presented in Table 6.15 below.

Table 6.15: Comparative analysis for IRQ: 2013 to 2016

Narrative	2013	2014	2015	2016
Mean Annual IRQ (%)	52.45	58.48	64.72	68.29
Year-on-year IRQ scores (%)	-	6.03	6.24	3.57
Companies with IRQ score below 50% (number)	33	18	10	8
Companies with IRQ score over 50% (number)	67	82	90	92
Highest IRQ score (%)	66.45	73.68	78.95	88.82
Lowest IRQ score (%)	23.68	26.97	29.61	26.97
Range (%)	42.77	46.71	49.34	61.85

As presented in Table 6.15, the mean annual IRQ scores for the JSE sampled Top 100 companies (over the four-year period) show a significant increase in the extent and quality of <IR> disclosures. The IRQ scores increased steadily from 52.45% in 2013, to 58.48% in 2014, to 64.72% in 2015, and to 68.29% in 2016. This may be interpreted as an improvement in IRQ by JSE listed companies perhaps because of the mandatory nature of <IR> in South Africa. This finding confirms the increase in the quality and extent of <IR> disclosure noted by Du Toit et al. (2017) and Haji and Anifowose (2016). This result is further affirmed by a continuous decrease in the

number of companies that scored an IRQ score below 50% i.e. 33% for 2013, 18% for 2014, 10% for 2015, and 8% for 2016.

Companies with IRQ scores higher than 50% increased in number over the four-year period from 67 in 2013, 82 in 2014, 90 in 2015 to 92 in 2016. The finding may also be interpreted in terms of highest IRQ scores where 2013 has 66.45%, 2014 has 73.68%, 2015 has 78.95% and 2016 has 88.82%. The researcher believes that continuous practice in producing IARs by companies has partly contributed to the improvement in the quality of IARs. A detailed interrogation of the factors that contributed towards the improvement or deterioration of IRQ over the four-year period was done when addressing Objective 3 below. For now, Objective 2 was addressed by analysing IRQ scores across the JSE sectors.

Year-on-year, IRQ is highest in 2015 with 6.24%, followed by 2014 with 6.03% and lastly 2016 with 3.57%. The biggest difference was expected in 2014 since companies were using the <IR> framework, which was released in December 2013 however it is surmised that, instead of a one-year adjustment, companies needed a two-year period to acclimatise to the new <IR> framework.

6.4 Objective 2 addressed (stage two): IRQ per JSE sectors – 2013 to 2016

This section presents IRQ scores across the JSE sectors for the years 2013 to 2016. It ends by presenting a comparative analysis of IRQ scores between the different sectors. The sector analysis shows how a particular sector is performing in terms of disclosure quality. That knowledge shows whether there is a need for amendment of sector-specific legislation or sector-specific monitoring. IRQ scores are presented below where Table 6.16 shows sector IRQ scores for 2013, Table 6.17 shows sector IRQ scores for 2014, Table 6.18 shows sector IRQ scores for 2015, Table 6.19 shows sector scores for 2016, and Table 6.20 shows a comparative analysis of the sectoral IRQ scores for the years 2013 to 2016.

Table 6.16: IRQ per JSE sectors: 2013

JSE Sector	Mean	N	Std. Deviation
Oil & Gas Producers	66.45	1.00	
Pharmaceuticals & Biotechnology	60.86	2.00	3.26
Industrial Metals & Mining	58.72	4.00	2.04
Health Care Equipment & Services	58.55	2.00	2.79
Mobile Telecommunications	57.24	1.00	
Life Insurance	56.95	7.00	6.17
Food Producers	56.91	6.00	5.44
Construction & Materials	55.92	1.00	
Industrial Engineering	55.92	1.00	
General Retailers	55.38	11.00	7.05
Beverages	55.26	2.00	5.58
Travel & Leisure	54.70	7.00	6.87
Banks	53.95	2.00	8.37
Real Estate Investment Trusts	53.24	14.00	5.73
Support Services	53.16	5.00	7.26
Food & Drug Retailers	52.47	4.00	10.07
General Industrials	52.30	4.00	10.87
Automobiles & Parts	51.32	1.00	
Media	49.67	2.00	2.33
Technology Hardware & Equipment	48.03	3.00	13.59
Chemicals	46.71	3.00	15.17
Personal Goods	46.38	2.00	17.21
Software & Computer Services	46.38	2.00	9.77
Electronic & Electrical Equipment	46.05	1.00	
General Financial	42.30	10.00	11.34
Industrial Transportation	42.11	1.00	
Mining	23.68	1.00	
Total	**52.45**	**100.00**	**9.18**

The "Oil and gas producers" sector has the highest IRQ score of 66.45%, while mining has the lowest IRQ score of 23.68%. The score for the oil and gas producers sector is

reasonable. However, the score for the mining sector is relatively lower. One would expect that the extraction sector (mining), which is known for depleting natural capital from the environment would do much better in terms of disclosure. This expectation comes from the rationale that mining is one of nature's most destructive sectors and hence there is a need to have high quality IARs, which reflect the extent of destruction and how the sector uplifts the lives of the communities in which the mines are located.

There is also need to reflect how the mining companies will decommission those mines, which will have reached the end of their life spans. Of the 27 sectors presented in the 2013 sample, 18 sectors (66.67%) scored above the 50% mark. The scores range from 51.32% to 66.45%. Nine sectors (33.33%) scored below the 50% mark. The IRQ scores range from 23.68% to 49.67%. Perhaps the 33.33% could be that different companies were using their own individualised <IR> frameworks since the <IR> framework was only released in December 2013 hence not addressing all the constructs addressed in this PAI. The IRQ scores for 2013, relative to other reporting periods (2014, 2015, and 2016), were addressed in detail in Table 6.20 below. Next to be presented in Table 6.17, are 2014's JSE sectoral IRQ scores.

Table 6.17: IRQ per JSE sectors: 2014

JSE Sector	Mean	N	Std. Deviation
Automobiles & Parts	71.05	1.00	
Industrial Engineering	69.74	1.00	
Mobile Telecommunications	69.41	2.00	2.33
Media	68.42	1.00	
Tobacco	68.42	1.00	
Health Care Equipment & Services	66.78	2.00	2.33
General Retailers	65.86	9.00	5.53
Construction & Materials	64.80	2.00	6.98
Banks	64.14	2.00	6.98
Life Insurance	63.05	6.00	13.28
Food Producers	62.94	6.00	5.65
Travel and Leisure	61.40	6.00	7.14
Industrial Metals & Mining	61.18	2.00	3.72
Chemicals	60.86	2.00	6.98
Pharmaceuticals & Biotechnology	60.53	2.00	8.37
Technology Hardware & Equipment	60.09	3.00	7.25
Support Services	57.61	7.00	8.87
Oil & Gas Producers	57.57	2.00	14.42
Food & Drug Retailers	57.02	3.00	14.07
General Industrials	56.45	5.00	13.87
Real Estate Investment Trusts	55.48	12.00	10.71
Non-life Insurance	53.29	2.00	8.37
Software & Computer Services	50.99	2.00	13.49
General Financial	50.77	12.00	12.64
Personal Goods	49.34	2.00	21.40
Beverages	48.68	2.00	26.98
Household Goods & Home Construction	44.08	1.00	
Industrial Transportation	42.11	1.00	
Real Estate Investment & Services	40.13	1.00	
Total	**58.48**	**100.00**	**11.11**

As presented in Table 6.17, from among the sampled companies for 2014, the automobiles and parts sector has the highest IRQ of 71.05% while the real estate investment and services sector trails with 40.13%. It is surprising that the real estate investment trusts sector, which is the closest competitor with the real estate investment and services sector, has done much better with a 55.48% particularly because the two sectors are governed by more or less similar legislation and therefore it is reasonable to expect similar results. The overall performance between the sectors seems acceptable with 24 (82.76%) sectors out of 29 sectors attaining IRQ scores above the 50% mark. The IRQ scores range from 50.76% to 71.05%. Five sectors (17.24%) out of the 29 sectors secured IRQ scores below the 50% mark. The IRQ scores range from 40.13% to 49.34%. Next, the JSE sectoral IRQ scores for 2015 are presented in Table 6.18 below.

Table 6.18: IRQ per JSE sectors: 2015

JSE Sector	Mean	N	Std. Deviation
Automobiles & Parts	75.00	1.00	
Banks	74.67	2.00	6.05
Pharmaceuticals & Biotechnology	73.68	1.00	
Health Care Equipment & Services	73.03	3.00	5.62
Mobile Telecommunications	73.03	1.00	
Chemicals	71.71	1.00	
Fixed Line Telecommunications	71.71	1.00	
Beverages	69.74	2.00	0.93
Industrial Engineering	69.08	1.00	
Industrial Metals & Mining	69.08	1.00	
Software & Computer Services	68.75	2.00	3.26
Tobacco	68.42	1.00	
General Retailers	68.27	9.00	6.63
Life Insurance	67.76	6.00	3.63
Food Producers	67.43	4.00	6.02
Travel & Leisure	66.82	7.00	5.01
Construction & Materials	66.67	3.00	2.49
Media	66.45	1.00	

Industrial Transportation	65.13	1.00	
Real Estate Investment Trusts	64.77	11.00	11.63
Food and Drug Retailers	64.47	3.00	13.67
General Industrials	63.82	6.00	11.64
Support Services	61.56	7.00	9.23
General Financial	60.81	14.00	12.44
Technology Hardware & Equipment	59.38	4.00	12.69
Non-life Insurance	56.91	2.00	15.35
Real Estate Investment & Services	50.22	3.00	13.25
Personal Goods	46.05	2.00	16.75
Total	**64.72**	**100.00**	**10.08**

As reflected in Table 6.18, for the 2015 selected companies, the automobiles and parts sector has the highest IRQ of 75% while the personal goods sector trails with 46.05%. The overall performance between the sectors is satisfactory with 28 (96.55%) sectors out of 29 sectors attaining IRQ scores above the 50% mark. The IRQ scores range from 50.22% to 75%. Only one (personal goods) sector (1/29 X 100 = 03.45%) out of the 29 sectors secured an IRQ score below the 50% mark with 46.05%.

The most plausible explanation of the 46.05% is that the companies in this sector (in this sample) have a primary listing in a foreign stock exchange other the JSE. In other jurisdictions, <IR> is voluntary therefore it is highly likely that these companies are not taking <IR> seriously. The IRQ scores for 2015, relative to other reporting periods (2013, 2014, and 2016), are addressed in detail in Table 6.16 above. Next, to be presented in Table 6.19 below are the JSE sectoral IRQ scores for 2016.

Table 6.19: IRQ per JSE sectors: 2016

JSE Sector	Mean	N	Std. Deviation
Mobile Telecommunications	81.25	2.00	6.98
Banks	79.61	4.00	4.26
Forestry & Paper	79.28	2.00	4.19
Fixed Line Telecommunications	76.97	1.00	
Pharmaceuticals & Biotechnology	76.32	1.00	
Travel & Leisure	76.32	1.00	
Food & Drug Retailers	73.90	6.00	3.81
Industrial Metals & Mining	72.76	5.00	7.28
Life Insurance	72.59	6.00	4.38
Mining	71.71	8.00	8.68
Oil & Gas Producers	71.27	3.00	20.54
General Retailers	70.54	9.00	3.42
Construction & Materials	70.39	1.00	
Software & Computer Services	70.39	1.00	
Technology Hardware & Equipment	70.39	1.00	
Health Care Equipment & Services	68.91	4.00	7.23
Food Producers	68.68	5.00	5.19
Support Services	68.42	2.00	5.58
General Industrials	67.93	4.00	9.36
Non-life Insurance	67.76	1.00	
Industrial Engineering	66.45	1.00	
Real Estate Investment Trusts	66.32	10.00	8.75
Real Estate Investment & Services	62.72	6.00	11.01
Beverages	57.24	2.00	11.16
General Financial	56.71	10.00	9.75
Tobacco	52.63	1.00	
Media	50.66	1.00	
Personal Goods	48.68	2.00	30.70
Total	**68.29**	**100.00**	**10.43**

For the 2016 selected companies, the mobile telecommunications sector has the highest IRQ of 81.25% while the personal goods sector is the lowest with 48.68%. The overall performance between the sectors is acceptable with 27 (96.43%) sectors out of 28 sectors attaining IRQ scores above the 50% mark. The IRQ scores range from 50.66% to 81.25%. Only one sector (personal goods) (1/28 X 100 = 3.57%) out of the 28 sectors secured an IRQ score below the 50% mark with 48.68%. The personal goods sector, which has the lowest score in 2015, also has the lowest IRQ score in 2016. As argued above, it is likely that this is the effect of having companies with a primary listing on a foreign stock exchange and only a secondary listing on the JSE. This may mean that there is poor buy-in of <IR> by the management, which leads to underinvestment in <IR> that ultimately leads to poor IARs. Next, to be presented in Table 6.20 are the IRQ scores for 2016 relative to other reporting periods (2013, 2014, and 2015).

Table 6.20: Comparative analysis for IRQ scores across JSE sectors: 2013 to 2016

Narrative	2013	2014	2015	2016
Number of JSE sectors	27	29	29	28
Number of sectors with IRQ over 50%	18	24	28	27
Number of sectors with IRQ under 50%	9	5	1	1
Highest sectoral IRQ (%)	66.45	71.05	75.00	81.25
Lowest sectoral IRQ (%)	23.68	40.13	46.00	48.68
Range (%)	42.77	30.92	29.00	32.57
Mean Annual IRQ for all companies (%)	**52.45**	**58.48**	**64.72**	**68.29**

As presented in Table 6.20, the highest sectoral IRQ score for 2013 is 66.45%, for 2014, it is 71.05%, for 2015, it is 75%, and for 2016, it is 81.25%. One may infer that the overall quality of <IR> is improving gradually over the years. This finding is confirmed by the constant increase in the number of sectors, which attained IRQ scores above 50% where 2013 has 18 out 27 sectors (66.67%), 2014 has 24 out of 29 sectors (82.76%), 2015 has 28 out of 29 sectors (96.55%), and 2016 has 27 out 28 sectors (96.43%). The continued decrease in the number of JSE sectors with IRQ scores below 50% may also be because of a gradual improvement in the quality of

IARs. This increase in the quality and extend of <IR> could be because of the experience gathered by companies over the years since the launch of the <IR> framework in December 2013.

6.5 Objective 2 addressed (stage three): IRQ per industry – 2013 to 2016

This section presents industry IRQ scores for the period, 2013 to 2016. IRQ scores per industry for 2013 are presented in Table 6.21; IRQ scores per industry for 2014 are presented in Table 6.22; IRQ scores per industry for 2015 are presented in Table 6.23 and IRQ scores per industry for 2016 are presented in Table 6.24 below.

Table 6.21: IRQ per Industry: 2013

Industry	Mean	N	Std. Deviation
Electricity, gas & water supply	66.4474	1	
Agricultural	63.1579	1	
Construction	55.9211	1	
Community, social & personal service	54.7462	14	6.5035
Manufacturing	53.5773	16	7.6118
Trade	52.0881	23	8.9256
Mining & quarrying	51.7105	5	15.7662
Transport, storage & communication	50.7675	6	11.5116
Finance & other business activities	50.7576	33	9.6370
Total	**52.4539**	**100**	**9.1753**

As presented in Table 6.21, for the 2013 sampled companies, the electricity, gas and water supply industry has the highest IRQ score of 66.45% while finance and other business activities industry has the lowest IRQ score of 50.76%. Perhaps compliance with many industry-specific pieces of legislation affected <IR> compliance. The other observation is that there is a narrower range of IRQ scores across the sampled industries ranging between 50.76% and 66.45%, a difference of 15.69%. Next, to be analysed is the IRQ per industry for 2014.

Table 6.22: IRQ per Industry: 2014

Industry	Mean	N	Std. Deviation
Agricultural	72.3684	1	.
Construction	64.8026	2	6.9780
Community, social & personal services	62.5000	12	6.2728
Mining & quarrying	62.2807	3	3.2453
Manufacturing	61.6541	14	11.3671
Transport, storage & communication	60.9375	8	9.7578
Electricity, gas & water supply	57.5658	2	14.4213
Trade	57.1796	23	11.6696
Finance & other business activities	55.0940	35	12.1513
Total	**58.4803**	**100**	**11.1075**

For the 2014 sampled companies, the agricultural industry has the highest IRQ of 72.37% while finance and other business activities industry has the lowest IRQ score of 55.09%. Finance and other business activities industry may have a lower IRQ score because there are many small companies (by market capitalisation) in this industry, which most likely underinvest in their <IR> processes, which ultimately leads to low quality IARs. There is a relatively narrower range of IRQ scores across the sampled industries ranging between 55.09% and 72.37%, a difference of 17.28%. However, the range is slightly higher than that of 2013, which is fixed at 15.69%. Next to be analysed, is the IRQ per industry for 2015.

Table 6.23: IRQ per industry: 2015

Industry	Mean	N	Std. Deviation
Agricultural	70.7237	2	1.3956
Mining & quarrying	69.0789	1	.
Community, social & personal services	68.7753	13	5.2192
Manufacturing	68.6005	11	3.7459
Construction	68.5855	4	4.3433
Trade	63.6239	24	11.3744
Transport, storage & communication	62.7467	8	10.6486
Finance & other business services	62.4289	37	11.7686
Total	**64.7237**	**100**	**10.0833**

For the 2015 companies sampled, the agricultural industry has the highest IRQ of 70.72% while transport, storage and communication industry has the lowest IRQ score of 62.42%. Transport, storage and communication industry attained the least score perhaps due to poor <IR> buy-in by some of the companies that may not see value in <IR>. There is even a narrower range of IRQ scores across the sampled industries ranging between 62.42% and 70.72%, a difference of 8.3%. The 2015 range (8.3%) is lower than that of 2013 (15.69%) and that of 2014 (17.28%). Further analysis on the 2013 to 2016 industry comparative analysis is presented in Table 6.21 below. Next, to be analysed, is the IRQ per industry for 2016.

Table 6.24: IRQ per Industry: 2016

Industry	Mean	N	Std. Deviation
Transport, storage & communication	75.9868	4	8.8998
Agricultural	75.2193	3	7.6251
Mining & quarrying	72.4154	14	7.6395
Construction	70.3947	1	.
Trade	69.1729	21	10.3214
Community, social & personal services	69.0789	8	9.4295
Electricity, gas & water supply	68.7500	2	28.3773
Finance & business services	65.6294	37	10.8385
Manufacturing	64.4079	10	9.4906
Total	**68.2895**	**100**	**10.4295**

For the 2016 sampled companies, the transport, storage and communication industry has the highest IRQ of 75.99% while the manufacturing industry has the lowest IRQ score of 64.41%. The range for 2016 is 11.58% and is higher than that of 2015 (8.3%) but lower than that of 2013 (15.69%) and that of 2014 (17.28%). Further detail on the 2013 to 2016 industry comparative analysis is presented in Table 6.25 below.

Table 6.25: Comparative analysis for IRQ scores across industries: 2013 to 2016

Narrative	2013	2014	2015	2016
Highest IRQ scores per industry (%)	66.45	72.37	70.72	75.99
Name of industry with highest IRQ	Electricity, gas & water supply	Agricultural	Agricultural	Transport, storage & communication
Lowest IRQ scores per industry (%)	50.76	55.09	62.42	64.41
Name of Industry with lowest IRQ	Transport, storage &communication	Finance & other business activities	Transport, storage & communication	Manufacturing
Range (%)	**15.69**	**17.28**	**8.3**	**11.58**

The highest IRQ scores per industry are showing a steady improvement from 66.45% in 2013, to 72.37% in 2014, to 70.72% in 2015 (a slight drop of 01.65% as compared to 2014), and to 75.99% in 2016. The extent and quality of IARs have been gradually improving over the four-year period. Perhaps the mandating of <IR> and the release of the <IR> framework contributed to this improvement in the IRQ scores. Furthermore, years of practice (experience) in producing IARs by JSE listed companies could have contributed to the gradual improvement of IRQ scores.

The introduction of postgraduate qualifications in <IR> in South African institutions of higher learning could also have contributed to a clearer understanding of the reporting system, which positively influenced the quality of IARs. Another probable explanation of the improved IRQ scores could be the effect of workshops offered by the IIRC, which were conducted twice a year in Johannesburg and Cape Town. Many stakeholders, especially preparers of IARs, benefitted from these workshops and this had a positive knock-on effect.

The gradual improvement in the lowest IRQ scores per industry further strengthens the deduction that the quality of <IR> has been improving over the years from 50.76% in 2013; 55.09% in 2014; 62.42% in 2015; to 64.41% in 2016. This trend suggests that

those industries, which were falling behind, are slowly catching up with the lead industries. Although there is an inconsistent trend in the range, the overall reduction from 15.69% in 2013 to 11.58% in 2016 suggests that the quality of IARs is improving where companies that trailed within a particular industry, are catching up with the lead companies.

The <IR> top performers' awards by major audit firms could have had an impact on the <IR> landscape in South Africa. Some of the bigger auditing firms gave awards to those companies that produced high quality IARs such as the "EY's Excellence in Integrated Reporting Awards", which runs annually. These top <IR> performers' awards have popularised the reporting system that potentially improved the buy-in from the company managers. The feedback given to those companies that did not do well helped them to address some areas, which were lacking, hence producing better IARs.

The transport, storage and communication industry is leading in 2016 with 75.99%. However, the same industry is trailing in 2013 and 2015 with 50.76% and 55.09% respectively. This might be because the companies, which had a poor buy-in of <IR>, changed their attitude and invested more in the <IR> processes.

The electricity, gas and water supply industry is the one leading for 2013 with 66.45% while the agricultural industry is leading for 2014 and 2015 with 72.37% and 70.72% respectively. The agricultural industry gets funding from the banks and there is a high possibility that the extra layer of scrutiny from the financial institutions helped the industry to improve its reporting mechanisms.

Lastly, the finance and other business activities industry is trailing with 55.09% in 2014, while the manufacturing industry is also trailing at 64.41% in 2016. For the finance and other business activities industry, it is likely because of the poor buy-in from smaller institutions that have not invested in the <IR> reporting system. As for the manufacturing industry, which has bigger companies with financial muscle, there is a potential for improvement. A further test relating to the mean annual industry scores for the period 2013 to 2016 was performed. It is called the Kruskal-Wallis test that was explained in section 5.3.2.9. The Kruskal-Wallis test results are presented and

interpreted below.

6.6 Objective 2 addressed (stage four): Kruskal-Wallis test on the mean annual industry scores

Table 6.26: Kruskal-Wallis test results: 2013 to 2016

	Test statistics-IRQ scores			
Narrative	2013	2014	2015	2016
Kruskal-Wallis H	1.672	7.032	4.977	9.677
Df (significance level)	5	4	4	4
Asymp. Sig (p-value based on chi-square approximation)	0.892	0.134	0.290	0.046

The results show that there are statistically insignificant differences between industry <IR> scores for the years 2013, 2014 and 2015. However, 2016 shows statistically significant differences between industry IRQ scores where the manufacturing industry has the lowest IRQ score (64.41%) while the transport, storage and communication industry has the highest IRQ score (75.99%).

Although no statistical differences were detected for 2013, 2014 and 2015, it is quite clear that the finance and other business services industry has the lowest IRQ score (50.76%) for 2013, while the electricity, gas and water supply has the highest IRQ score (66.45%). It is also clear for 2014, that the finance and other business activities industry has the lowest IRQ score (55.09%) while the agricultural industry has the highest IRQ score (72.37%). Lastly, it is clear for 2015 that the transport, storage and communication industry has the lowest IRQ score (62.42%), while the agricultural industry has the highest IRQ score (70.72).

The IRQ scores show an upward trend. However, Haji and Anifowose (2016) caution that, despite the increasing trend and evidence of both symbolic and substantive <IR>, the current <IR> practice is largely ceremonial in nature, produced to acquire organisational legitimacy. Setia et al. (2015) share the same view when they find that JSE listed companies are adopting a legitimation strategy based on symbolic management when preparing IARs mainly to legitimise their existence.

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An increase in IRQ scores represents an improvement in IRQ. These gradual improvements in the IRQ scores are explainable from different perspectives:

- ❖ Whether preparers' intention is to please the principal (agency theory).

- ❖ Whether the preparers' intention is to improve the decision-usefulness of IARs (decision-usefulness theory).

- ❖ Whether the intention of the preparers is to have their entity conform to societal, economic and political norms (political economy theory).

- ❖ Whether the preparers' intention is to seek existential legitimacy (legitimacy theory).

- ❖ Whether, the preparers' intention is to adapt their entity's organisational form to bring legitimacy to the organisation (institutional theory).

- ❖ Whether preparers' intention is to please different stakeholders (stakeholder theory).

In South Africa, for the years 2013 to 2016, the <IR> implementation improved as shown by the IRQs scores since a positive change in IRQ scores (especially those arrived at using a polychotomous accountability index) represent an improvement in IRQ, whereas a negative change in the IRQ scores signifies a decrease in IRQ. Several reasons can explain these improvements and they may be seen through the perspectives outlined above which were expounded in detail in Chapter 2. The last aspect of this chapter is the summary and conclusions and is presented below.

6.7 Summary and conclusions

The chapter addressed the objectives raised in section 1.4. Objective 1 was "to develop an extensive weighted polychotomous accountability index to measure the extent and quality of <IR> disclosures by JSE listed companies". The draft PAI and the final PAI developed are presented from Table 6.1 to Table 6.6. The process undertaken to prepare the draft PAI and the final PAI is also presented in detail. The final PAI has 44 constructs and with a total score of 152 points (see Appendix A1 and A2).

The second objective, "to investigate the feasibility and practicability of applying the

accountability index to selected JSE listed companies over the period 2013 to 2016" was addressed in section 6.3. The mean annual IRQ scores were 52.45% for 2013, 58.48% for 2014, 64.72 for 2015, and 68.29 for 2016. The highest IRQ scores were 66.45% for 2013, 73.68% for 2014, 78.95% for 2015, and 88.82% for 2016 while the lowest IRQ scores were anchored at 23.68% for 2013, 26.97% for 2014, 29.61% for 2015 and 26.97% for 2016. In 2013, 67 out of 100 companies attained an IRQ score of 50% or higher; in 2014, 82 out of 100 companies scored an IRQ score of 50% or higher; in 2015, 90 companies out of 100 scored an IRQ score of 50% or higher; and in 2016, 92 out of 100 companies scored an IRQ score of 50% or higher. Out of 100 companies: 33, 18, 10, and eight scored IRQ scores below 50% for 2013, 2014, 2015, and 2016 respectively.

The IRQ scores across the JSE sectors were presented in section 6.4. The results show that, for 2013, the oil and gas producers sector has the highest IRQ score of 66.45%, while mining has the lowest IRQ score of 23.68%. For the year 2014, the automobiles and parts sector has the highest IRQ of 71.05% while the real estate investment and services sector trails with 40.13%. For the 2015 selected companies, the automobiles and parts sector has the highest IRQ of 75% while the personal goods sector trails with 46%. For the 2016 selected companies, the mobile telecommunications sector has the highest IRQ of 81.25% while the personal goods sector is the lowest with 46%.

Still addressing Objective 2, further results show that, for 2013, 18 out 27 sectors achieved an IRQ score higher than 50%; for 2014, 24 out of 29 sectors attained an IRQ score higher than 50%; for 2015, 28 out of 29 sectors got an IRQ score higher than 50%; and for 2016, 27 out of 28 sectors attained an IRQ score above 50%. This static may be differently stated from the perspective of number of sectors with IRQ scores under 50%. For 2013, nine out of 27 sectors scored an IRQ score lower than 50%; for 2014, five out of 29 sectors acquired IRQ scores below 50%; for 2015, one out of 29 companies scored an IRQ lower than 50%; and for 2016, once again, one out of 28 companies scored an IRQ less than 50%.

In Objective 2, an industry perspective was utilised in order to understand and unpack IRQ by JSE listed companies. The results show that, in 2013, the electricity, gas and

water supply industry has the highest IRQ score of 66.45%, while the transport, storage and communication industry has the lowest IRQ of 50.76%. In 2014, the agricultural industry has the highest IRQ score of 72.37% while the finance and other business activities industry is the lowest with 55.09%. For 2015, the agricultural industry is in the lead (as it was in 2014) with an IRQ score of 70.72% while the transport, storage and communication industry has the lowest IRQ score of 62.42%.

The last result to be expressed in Chapter 6 is the Kruskal-Wallis test. The results show that there are statistically insignificant differences between industry IRQ scores for the years 2013, 2014, and 2015. However, 2016 shows statistically significant differences between industry IRQ scores, where the manufacturing industry has the lowest IRQ score (64.41%), while the transport, storage and communication industry has the highest IRQ score (75.99%).

Two insights can be drawn from this chapter. Firstly, the IRQ scores improved over the years under study. This was considered to be because of the experience gained by companies over the years in preparing IARs. Secondly, mandating of <IR> in South Africa caused a rapid increase in the IRQ scores, which ultimately signifies an improvement in the extent and quality of IARs. After presenting the results, which addressed Objective 1 and, Objective 2, focus is turned to Objective 3 and Objective 4, which were addressed in Chapter 7.

CHAPTER 7

ANALYSIS OF RESULTS: QUALITATIVE DATA ANALYSIS

7.1 Introduction

The chapter presents the results of the data that was collected via the semi-structured interviews. As explained in Chapter 5, interviews were carried out with representatives of companies, which attained the highest IRQ scores for the years 2013 to 2016. The chapter begins with an introduction and then addresses Objective 3 and Objective 4 and ends with the presentation of the chapter summary.

Under Objective 3, which reads, "To investigate the factors that contribute towards a change in <IR> quality", a broader question was presented to respondents that reads, "What are the factors that contributed to your company attaining a higher IRQ score when other companies scored very low?" This question was intended to identify the qualitative factors that contributed to the attainment of IRQ scores that were presented in Chapter 6 under sections 6.3 to section 6.21. Several factors were identified, which contributed to relatively high IRQ scores. These factors, as presented by respondents, include, among others, teamwork, benchmarking, training, experience, taking <IR> seriously, and addressing stakeholder needs.

Objective 4, which reads, "To make suggestions and recommendations about <IR> by JSE listed companies in the light of research findings" is presented following Objective 3. To address this objective, three major questions were given to the respondents. These questions are:

- ❖ What are the challenges (practical and theoretical) that you face in preparing IARs?

- ❖ What are the factors (in your opinion) that may have contributed to relatively low IRQ scores by companies that have low IRQ scores?

- ❖ Which changes do you think must be done to improve the <IR> framework and to improve <IR> in general?

The answers to these three questions form the basis with which Objective 4 is

addressed. Objective 3 is unpacked below.

7.2 Objective 3 addressed

The third objective is "To investigate the factors that contribute towards a change in <IR> quality". As per the selection criteria explained in section 5.3.3.4, five companies were chosen where interviews were conducted to establish the factors that contributed towards the IRQ trends for 2013, 2014, 2015, and 2016. Of the five companies selected, three had more than one respondent each, while two companies had one respondent each. The questions presented in the interview and the responses from the respondents are presented below.

7.2.1 What are the factors that contributed to your company attaining a higher Integrated Reporting Quality (IRQ) score when other companies scored very low?

The same question together with any necessary follow-up questions was presented to the five companies and the answers proffered are articulated below.

❖ Some companies take <IR> seriously

Three of the five interviewed companies raised this as one of the important factors, which contributed towards a better IRQ. This factor is understood from a perspective where some companies are producing IARs just for regulatory compliance. This means that their reporting is not necessarily to inform their stakeholders. The companies doing well in terms of IRQ have an approach where reporting goes beyond the minimum requirements. One respondent explained,

> The one reason why we focus on integrated reporting is we have seen the positive relationship between a good report, balanced disclosures and the outside markets' perception and the reputation you have.

A link is drawn between good reporting, balanced disclosures and company reputation in the market. This shows that some companies do well because they value their reputation that they are preserving by managing users' perceptions.

Taking <IR> seriously stems from a total buy-in by the executive management. Through their buy-in, funds are allocated for setting up teams with adequate human

resources, for training and for setting up sophisticated systems. This ultimately leads to high quality IARs.

❖ **Teamwork**

All respondents from the five companies interviewed agree that they produced high quality IARs due to working in teams. Teamwork essentially begins with setting up teams with qualified and experienced individuals. This includes reassignment and utilisation of talented employees. One company established the position of "Manager Sustainability and <IR>" who drives the whole process from setting up a team to the final product of the IAR. Personal skills for this management position that include passion for <IR>, possession of a global view, and possession of good relationship skills, contributed to the production of a high quality report.

Each team member works on an assigned section of the IAR. They meet regularly to update each other on their progress. Furthermore, proper coordination and communication are maintained throughout the year, not only when IARs are due. The different IAR parts will eventually be combined to produce one continuous IAR. The use of independent reviewers who check the golden thread guarantees semantical flow in the IAR. As one of the respondents explains:

> Directly and indirectly, we probably have a team of 10 people but then contributors are probably 100 people, and there are about 30 to 40 reviewers.

The result was specialisation of the team members, which, in turn, makes the task of constructing an IAR much easier in the following year. An absence of teamwork is one of the reasons why companies produce poor quality IAR reports.

❖ **Benchmarking**

Respondents from three of the five interviewed companies agree that benchmarking contributes to the production of high quality IARs. Benchmarking entails using another IAR as a point of reference for making comparisons with the current IAR. Benchmarking can be in the form of self-benchmarking where a company compares its current IAR with previous IARs. It may be national benchmarking where a company compares its current IAR with IARs of companies in the same sector or industry in a

particular jurisdiction. A respondent noted,

> We are critically aligned to integrated reporting in our industry so we are quite aware of what I think … or somebody is doing, so we simply do not want to do less and where we can, we want to do better. It is healthy competition.

When companies compare their IAR with their peers' IARs, this leads to an improved quality of reporting.

The respondents agree on the role being played by Ernst & Young in performing the benchmarking exercise through the "EY's Excellence in Integrated Reporting Awards" that happens yearly. Companies benefit from the comments and suggestions offered by the preparers of the report.

Benchmarking may be international where the company compares its IAR with those in similar sectors or industries of other jurisdictions. It could be an international organisation performing the comparisons. Some of the respondents mentioned the Report Watch as one of the international organisations that performs an international benchmarking exercise. Overall, benchmarking whether self, national or international has the benefit of improving the quality of <IR> reporting.

One respondent however cautioned that, with the Ernst & Young awards, some companies were producing glossy reports at the expense of quality. Therefore, argues the respondent, the idea is not to pursue Ernst & Young awards, but rather to pursue an IAR that can be owned by the company.

❖ **Training**

Respondents from four of the interviewed companies agree that quality of <IR> is higher due to attending training on <IR>. One of the respondents said,

> I think the level of training does have an impact on the integrated reporting team.

Training could be offered by national or international organisations that have collaborated with the IIRC. Ernst & Young empowers companies and offers intensive training programmes on what they learned from the awards and the trends that are currently being practised. Keeping up with those trends improves the quality of <IR>.

One of the five companies sent one of the <IR> team members to attend a postgraduate diploma in <IR> at the University of Pretoria. The respondent confirms that the diploma helped her to lay a foundation of what an IAR is, and what goes on behind <IR>.

❖ **Experience**

Respondents from three of the interviewed companies felt that they are producing higher quality IARs due the experience they have accumulated over the years because their companies have efficient teams and systems to produce IARs. This means that data is easily available and accessible to them. Because some companies were early adopters when <IR> became a statutory requirement by the JSE, their transition was relatively smooth. One of the respondents explained:

> We get to a level of maturity that has been built over the years that we can spend a lot of time on individual parts of the report, inserting years and upgrade them and improve them as required by regulation.

These systems contribute to companies spending less time in the process to improve the quality of their IARs cumulatively.

❖ **Addressing stakeholder needs**

Respondents from three of the five companies interviewed concur that meeting the needs of their most relevant and influential stakeholders contributes towards a better IRQ. The companies engage with the influential stakeholders in order to find out what they want to see and what they want to know. Influential stakeholders could be shareholders, investors, analysts, rating agencies, and any other stakeholders who might have direct influence on the life of the entity. One of the respondents had this to say:

> What we recognised in different parts of our global operations is that stakeholders who were interested in getting information from us were quite different. In America, it is very much customers, in Europe it is more often employees, in South Africa we found it is government and NGOs. So yes, defining whom you are writing the report for while meeting minimum requirements, I guess, is the next phase of the decision that will influence the quality of what you are writing.

Respondents from another company also explained that they bring their shareholders together and seek their input on what has to be presented in the IAR. The respondents posit that ultimately, this consultation improves the quality of their reports since the preparers of IARs will focus on what value stakeholders get as opposed to what is rated highly by observers as a good IAR. Some companies, which have higher IRQ scores, tend to be guided more by stakeholder needs rather than what observers deem important.

❖ **First understanding principles before reporting**

One of the respondents felt that they do well in producing high quality IARs because they exercise caution before they start reporting on any principle. They first understand the principle through training (whether internal or external) or through observing how competitors in a similar industry report on that particular principle. He made this comment:

> One of the approaches we generally have is to be a fast follow or maybe a bit slower than that. What I am trying to say here is that the first year, six capitals are released; we are never going to do that first. We let other companies report first. We ourselves understand what they do first, until we are comfortable you know. Whether it is six capitals or any other standard, we make sure that we understand it and that the people proposing that this is the new way of doing things actually understand what it is they are doing. Therefore, you could see us as a bit cautious but I think it helps us define and certainly makes it easier for us to write reports when the standards have set and there is a better understanding of what we are doing.

This means that some companies that attain high IRQ scores adopt a cautious approach by first understanding the principles through training or observing what competitors in similar industries do. Armed with knowledge and observed experiences, they start reporting on the same principles and this positively influences the quality of <IR>.

7.3 Objective 4 addressed

Objective 4 is: "To make suggestions and recommendations about <IR> by JSE listed companies in the light of research findings". In order to address Objective 4, three

questions where presented to the respondents:

- ❖ What are the challenges (practical and theoretical) that you face in preparing IARs?

- ❖ What are the factors (in your opinion) that may have contributed to relatively low IRQ scores by companies that have low IRQ scores?

- ❖ Which changes do you think must be done to improve the <IR> framework and to improve <IR> in general?

The three questions and their respective answers are presented below.

7.3.1 What are the challenges you face in preparing integrated reports?

The question was presented to companies/respondents (as summarised in Table 5.1) in order to extract the challenges that they encounter in preparing IARs. The challenges could be of a practical or theoretical nature. The respondents identified the following challenges:

- ❖ **Balancing between length and content of IARs (conciseness)**

Respondents from four of the interviewed companies concur that it is difficult to balance between the length of the IAR and its content as informed by the <IR> framework's content elements. Length and content can be described through one of the guiding principles, namely, conciseness. As argued in section 4.9.5, conciseness remains a highly theorised, subjective and vague construct. Preparers of IARs have to find their own definition and parameters of what a concise IAR must look like. After setting up those individualised parameters, it is also difficult to balance between conciseness and detailed content. This poses a challenge of what has to be covered in the IAR against what has to be covered in other reports like the remuneration report, the sustainability report, or the environmental report. This was summarised by one of the respondents who said,

> … That everything connects and it is more difficult to write a story in a few words than in many words, it is very difficult.

Another respondent shared similar sentiments:

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> It is a bit of a challenge to keep that balance with what you have to address with
> the pages that you have got.

The situation is worsened by the fact that <IR> requires a degree of creativity, conceptual thinking, and a certain level of strategic articulation and operation. This ultimately has a negative effect on the conciseness of the report.

❖ **Difficulty in balancing different stakeholder needs**

Respondents from three of the five companies interviewed agree that balancing the different needs of stakeholders in the IAR is a difficult task. This is because stakeholders harbour different interests in a particular entity therefore constructing a reasonable distribution of user needs in the IAR becomes a complicated process. One of the respondents expressed this view:

> How can my integrated report talk to the community in rural KwaZulu Natal and, at
> same time, talks to a community in Germany? They need very different information
> reports.

It is not surprising therefore, that the companies that have higher IRQ scores, will have done well in balancing the disclosures of different stakeholders.

❖ **Making information comparable is difficult due to changes**

Respondents from three of the interviewed companies asserted that intra-company or intercompany comparability of information is challenging due to changes in materiality, one of the pillars (guiding principles) on which <IR> is founded. One of the respondents explained:

> The rules change and because it is based on materiality; what is material to you in
> one year might not be the same the following year. This makes it very difficult to
> keep building on it, but also stay abreast with industry changes because what is
> happening in industry is within the socio-economic environment in South Africa and
> what impact what goes into an annual report.

Comparability of non-financial information therefore becomes compromised due to the changes in materiality and in industry practices. Unlike financial reporting, where there is retrospective application of principles when there is a change in policy, <IR> has no

guidelines for this. Ultimately, incomparability affects reliability and information becomes questionable, argued one of the respondents.

The respondents also concluded that comparability of IARs is problematic because of a lack of standardisation. This emanates from the fact that <IR> is principles based and not rules based therefore each company has its own interpretations and judgements. A similar argument was presented in section 3.11 where the researcher argued that the <IR> framework leaves too much discretion to the firm's management and there is the possibility of concealing opportunistic behaviours.

❖ **Slow buy-in from the directors and executive management**

Respondents from two of the five interviewed companies indicated that they face a challenge of a slow buy-in of <IR> by the executive management despite it being a statutory requirement. The ripple effect is that the senior management do not avail funds for setting up systems and hiring suitably qualified personnel or even for the use of experts as reviewers before publishing the IAR. In some cases, the senior executives resist suggestions that are more aligned to <IR>. One of the respondents thought the following:

> So a big gap I have at moment is that I have asked for this before, I asked for a sponsor at board level and a sponsor at executive level. The sponsor must be one who is knowledgeable in integrated reporting and both of these positions have not been given to me yet. Therefore, I am fighting on a practical level where I have to punch above my weight all the time and I only get it by very good personal skills and ability to communicate. That is the gap we have. There is not at the moment one executive who loves this thing who wants to be the father of it and there is not one board member who loves it that they want to be the father of it, so I am looking for two fathers or at least a father and a mother. Therefore, those are some of the practical difficulties.

This remark explains that, without a full buy-in from the directors and the executive management, the <IR> process may result in companies attaining low IRQ scores.

The respondents also reported that they witnessed partial buy-in when peer employees below the executive management fail to see the bigger picture of <IR> as

they tend to focus on their own functional areas. They may not see how they connect to the upstream and downstream functions that they interact with on a day-to-day basis. As a result, some take time to respond to information requests because they focus on their functional areas and this negatively affects the quality of <IR>.

❖ **Balance between quality disclosure and avoiding giving away competitive information**

Respondents from one of the companies interviewed stated that it is a relatively difficult task to produce a high quality IAR without divulging company information to competitors in the industry. In fact, the respondent remarked that:

> A practical consideration is where the requirements are trending on commercial interests and where potential reporting can be providing like competitive information and there could be disadvantages in the day-to-day operations, which is something that needs careful consideration before you decide on how you will report those.

This means that balancing adequate disclosure information without revealing competitive information is a challenge that needs careful attention as companies with low IRQ scores may be affected by this issue.

❖ **Business model and the six capitals are deemed difficult concepts**

Respondents from four of the interviewed companies concur that the two constructs of business model and the six capitals are complex and difficult to present and disclose in the IARs. They argue that the two concepts are too academic and abstract and they struggle to understand the practical meaning of capital in a real business environment. The other challenge mentioned here is how the capitals link through trade-offs. In relation to capital linkages, one of the respondents said,

> There is a little bit of a challenge in how capitals kind of link. I think that is something I struggle a little bit with.

Another respondent also spoke about her understanding of the six capitals:

> I do not feel comfortable that I or anybody in the organisation really understands what is meant by six capitals and how to actually report on that.

This finding confirms the finding made by Coulson et al. (2015) who contend that there are challenges regarding capitals and these relate to the use of capitals' terminology; analysing connectivity between the capitals; and the extent to which value created (and depleted) by each capital should be monetised quantitatively.

One of the respondents explained that, in some cases, they fail to understand the business model particularly the six capitals which are inputs into the business model:

> Differentiating between outputs and outcomes is not such an easy task

Lastly, quantifying the trade-offs is problematic because some of the capitals are not easily quantifiable. Quantification of trade-offs entails quantification of value creation, which manifests through an increase, decrease or transformation. The respondents state that it is difficult to articulate the linkages between capitals in terms of whether the effect on capitals was an increase, decrease, transformation, or merely preservation of value. He summed this up as:

> Value creation is a good concept but a bit of a problem, because there is so much intangible value we talk about. So the value creation, there is a tangible part where you ransom things but there is an intangible part like how does good governance create value? We know the absence of good governance is destructive, like for example, the Steinhoff case, so you do not see the value unless it is not there.

❖ **Consensus on the storyline to be told**

Respondents from one of the interviewed companies stressed the fact that, in some instances, there is no consensus between the board of directors and the executive management. Disagreements were found on the theme to ground the IAR or on the strategy to be implemented in constructing the IAR. The respondent from this company asserts:

> The practical challenges are getting everybody around a table to agree on the message. That is the board of directors and the executive management. Getting agreement on a theme you totally will not believe how separate these members can be.

It will therefore be fair to say that challenges relating to consensus between the board

of directors and the executive management could be one of the reasons that some companies have low IRQ scores.

❖ **Deliberate underreporting by competitors**

One of the respondents stressed the fact that some competitor companies in the same industry may choose an approach that produces lower numbers, particularly for environmental reporting such as water consumption, energy consumption, and carbon emissions. Despite using more or less similar technology, some competitors always have lower numbers that are favoured by environmental rankings. As a result, companies with higher numbers are perceived as "troublemakers" and continue to be targeted by the government. More often than not, companies with higher numbers are not given an opportunity to explain the adopted methodology that led to higher numbers. The respondent held strong views about what he termed "unscrupulous business practice", which leads to unfair comparisons between companies that adopted different methods of environmental reporting.

❖ **Failure to meet the perceived expectations**

Respondents from one of the companies believed that, in some cases, the way they conceptualise and present IARs may not necessarily meet the expectations of the users of IARs. The respondent representing the company said:

> But you know then you get criticism that why did you put this in the front of the report, why is it not at the back of the report? So challenges are that the way we think and the easiest way to write reports does not appear to be the way people expect the appearance of the output of the report.

That may be the reason why one of the respondents suggested the need for academic or professional research to establish what users expect to see in an IAR, particularly influential users like Allan Grey, Investec and Old Mutual who were identified by name. The same respondent made a suggestion that academic/professional research could ascertain if users attach more value to a company that discloses more than a company that does not. After elaborating the factors that contributed towards high IRQ scores by companies, the next research question, as was explained in section 7.3, is dealt with.

7.3.2 What are the factors (in your opinion) that may have contributed to relatively lower IRQ scores by companies that have low IRQ scores?

There are two reasons why companies with high IRQ scores were interviewed about the performance of those companies with low IRQ scores. The first reason is that the researcher thinks that these companies probably struggled with <IR>, particularly in the earlier years, therefore they must be aware of the factors that contribute towards lower IRQ scores. Secondly, since interviews belong to the qualitative design, the sample size is more about quality and not necessarily quantity therefore preference was given to the higher performing companies who granted interviews much more easily. One company (with two respondents) did not answer this question, so responses are based on four companies (six respondents). The respondents raised a number of factors that are articulated below.

❖ **Understanding of <IR> is unclear**

Respondents from three of the companies report that some companies attain low IRQ scores because they do not clearly understand <IR>. One of the respondents argued that there is a misconception that <IR> is about the IAR but <IR> goes beyond merely an IAR in that it is a consistent weekly, monthly, half-yearly, or yearly reporting process. The other respondent expressed:

> Integrated reporting is not just the integrated annual report, but it becomes a process of communicating throughout the year on everything and we do linking back to capital.

As explained above, one of the challenges contributing towards poor quality IARs is that the concepts of capitals and the business model are deemed difficult to comprehend, leading to bad IARs. Preparers fail to understand the quantification process of the different capitals, how these capitals link, and any trade-offs between the capitals. Some also struggle with distinguishing between outputs and outcomes. In some cases, there is a lack of common understanding of <IR> in the organisation between the preparers of IARs and the executive management. This negatively affects the quality of IARs. In some cases, it may be a lack of understanding of <IR> between the preparers themselves. This also has adverse effects on the quality of reporting.

This finding confirms that of McNally and Maroun (2018) who note that, from the

interviews they conducted with preparers, it was clear that some had a limited understanding of the purpose of <IR>. Some preparers lacked a sound understanding of the rationale for preparing the new reports and some lacked knowledge of the information being requested for inclusion in the documents. Therefore, instead of participating actively in developing the accounting system, they resisted change. This finding confirms what experts interviewed in the study by Perego et al. (2016) said that most companies currently have a weak understanding of the business value of <IR>.

❖ **Not seeing value in <IR>**

Respondents from four companies agreed that some companies just want to meet the regulatory requirements of <IR>. They tend to focus on profits only while negating the need for improved reporting. They also observe that some companies are not concerned with improving their IRQ scores because they perceive that good <IR> does not bring benefits such as a reduced cost of borrowing. One of the respondents described companies with low IRQ scores:

> I think, personally, that they do not care. They do not feel that it is important to report. At worst, they are trying to hide or not disclose things. I think they do not want to disclose because their performance in specific areas is not good. Moreover, it is not good because management does not make it a priority, it can be, for example, environmental performance, social performance or whatever it is. Therefore, I think they do not feel they have a responsibility and accountability to disclose how they operate to market investors and so on. If they are not JSE listed, then they have even less motivation to disclose.

Another respondent also said:

> You know, if your company is scoring 23%, it means probably the CFO or your CEO or your board does not take it seriously because it is not that difficult to do. You know, even if you do a simpler version. I mean, to get 23% means you probably missed many things.

The point is that one of the reasons why companies do not attain high IRQ scores is because they do not see value in preparing high quality IARs. As a result, the companies merely fulfil the regulatory requirements of producing an IAR, but without consideration because they do not realise the benefits of preparing high quality IARs.

❖ **Incomplete embrace or partial buy-in of <IR>**

As noted above under section 7.3.1, an incomplete embrace or a partial buy-in of <IR> by the executive management or board of directors contributes to the production of low quality IARs leading to negative consequences that include:

- Provision of inadequate funds for the <IR>processes

- Lack of properly qualified personnel as a result of shortage of funds

- Non-attendance of <IR> training by <IR> practitioners as result of shortage of funds

- Lack of executive management support that contributes towards employee despondency.

One of the respondents summed this up:

> Success of <IR> depends much on the extent to which you got your executioner or leadership in.

This means that, without adequate leadership support, chances of success for <IR> are minimal.

❖ **Lack of skills and resources**

Respondents from the three companies interviewed asserted that, companies with low scores in terms of <IR>, are affected by the lack of resources. This usually means financial resources, which affect human resources that, in turn, creates a skills gap, which ultimately leads to the production of low quality IARs. The same respondents posited that, in most cases, it is the smaller companies that lack resources. They argue that where there is partial buy-in from the executive management and the board of directors, low IRQ scores are attained. One of the respondents summed this up:

> Companies that struggle are usually smaller companies, which do not have resources, perhaps management time, funds for <IR>, and fewer human resources.

❖ **Outsourcing**

Respondents from one of the companies interviewed emphasised the negative effects brought about by outsourcing the preparation of IARs. They contend that the person/company given the task to prepare IARs lacks the emotional connection with the entity therefore they are unable to prepare IARs with high IRQ. On this matter, one of the respondents said:

> I know some organisations outsource writing of their reports. Here are expert writers, they are good in doing graphics and putting things into words but they are not living the organisation. You know, they are not dealing every now and again with the death of an employee through an accident or they are not dealing with a community that is being uplifted through some of your actions. They could see the story on a piece of paper and they can write it, but understanding those daily interactions with communities, customers, and shareholders can be difficult for somebody who comes from the outside.

❖ **Chasing awards at the expense of the company's actual <IR> philosophy**

Respondents from one of the interviewed companies concluded that some of the companies attain low IRQ scores because they spend time and resources pursuing awards and accolades at the expense of producing IARs that reflect a company's <IR> capability. One of the respondents felt:

> I think sometimes with these E&Y awards, we can fall into the trap of creating glossy cosmopolitan magazines. You know we can take the form factor, the look and feel of it as more important as the function. I am beginning to see a trend where companies are producing these things for the sake of looking good but not really looking that the content is reflective of the company's actual thinking or performance. So they are becoming like glossy magazines and not that this is here because it actually tells the reader something. Therefore, my board and executive have told me not to pursue awards but pursue a report that is owned by the company.

In other words, winning an award must not be the priority for constructing IARs, rather, it is a bonus. The first priority of every reporting endeavour must be to report the <IR> function of the entity. Attention is now turned to answering question three (in Objective 4) as was explained in section 7.3.

7.3.3 Which changes do you think must be done to improve the <IR> framework and to improve <IR> in general?

The question was presented to respondents to establish what they perceived to be areas that needed improvement. The question is two-pronged in that it focuses on the conceptual and the practical side of <IR>. It is intended that the insights might improve policy formulation and the practical implementation of <IR>.

❖ **<IR> concepts and principles need to be more synchronised so that they are not in conflict with each other**

The researcher under section 3.11 raised this point. It was noted that some of the concepts contradict each other. An example is the target audience of the <IR> framework, which was identified as the for-profit companies (private sector) yet, at the same time, the framework, purports to address not-for-profit organisations. The two types of entities have different objectives therefore they cannot be guided by the same policy document.

Another contradiction is found under the purpose of an <IR>. The <IR> framework states that providers of capital are the primary purpose of an IAR. The secondary purpose is to benefit all stakeholders interested in the organisation's ability to create value over time, including employees, customers, suppliers, business partners, local communities, legislators and policy-makers. In essence, <IR> purports to be catering for all stakeholders, yet it focuses only on providers of capital. One respondent concurred when she said,

> Personally, I find a mismatch that if integrated reporting is talking about the broader range of creating wealth for everybody, it is not just creating wealth for the providers of capital but it is providing value for the broad range of stakeholders. So it is a bit of a strange thing if they say it is only for the providers of capital whereas they are kind of articulating what they say must be the message for the broader range.

Some of the respondents concluded that there are conflicts in the <IR> constructs. They urged the IIRC to conduct an audit and implement some corrective measures, as one of the respondents noted:

> A lot of ideas for integrated reporting certainly to me feels like are very much in conflict with each other. Therefore, they need to be synchronised. Your report should not be too long yet they want you to cover everything. The operations of your business, how that impacts all your stakeholders and these are complex topics.

In other words, the guiding principles of conciseness compared to reliability and completeness are deemed to be in conflict with each other. Another respondent expressed the same sentiments when he said,

> The problem with integrated reporting is trying to explain it all in one report, but that is actually very difficult.

It is problematic to produce an IAR that is concise, and yet complete. This probably explains why one company's 2016 IAR is 468 pages, whereas other companies' IARs have IARs that are 35 and 57 pages long. As argued in section 3.9.5, without guidance, conciseness remains a highly theorised, subjective and vague construct. This leads to the next point where some respondents suggested a blending between principles and rules in order to minimise subjectivity and vagueness.

❖ **Introducing rules so that <IR> may be a combination of principles and rules**

<IR> is premised on the principle-basis, which compels a company to apply the "comply or explain" principle. This principle holds that a company has to comply with the principles and, if it does not comply, then it must explain why it failed to comply. Respondents from two companies believed that <IR> must continue to be guided by principles. However, as argued in section 7.3.1, comparability becomes a problem since companies use different judgements and interpretations.

However, representatives from the other two companies had a different view that <IR> must be based on rules since that helps with comparability. They believe standardisation also minimises chances of underreporting, which was mentioned above. This finding confirms what Du Toit et al. (2017) conclude that there still exists significant uncertainty as to the amount of reporting that is required in IARs. Having guiding rules and principles might minimise this uncertainty.

There were however representatives from one company who argued in favour of a new model where principles would be blended with rules. The researcher agrees with this model because there were guidance, especially with those constructs that are highly theoretical, subjective and vague. An example is the guiding principle of conciseness, which was explained above. Guidance would assist in preparing a standard concise IAR. The wide variations between IARs, which were identified above, would be minimised.

- ❖ **<IR> must align its terminology with that of other guideline bodies like rating agencies**

Some respondents noted that the language/terminology used in <IR> is not compatible with that used by other role players such as rating agencies. They therefore suggested that the IIRC be more flexible so that they may "speak the same language" with organisations who share a similar vision. One of the respondents noted:

> I know for some companies, this capital model is still an issue. Therefore, if they have flexibility that you do not have to talk about the capitals because people still understand the triple bottom line and when rating agencies, to me like IRS, all of them never speak about capitals. They always speak about environments, social governance and climate change. So the language used by rating agencies for big investment corporations, public investment corporations and all of those things they do not use the same language as IIRC. If you look at GRI, it does not use capitals, it has another language. So if the IIRC could create great flexibility in terms of capitals, it would help other companies because there is a disconnection between the language used by rating agencies and on the IAR.

In some cases, the disconnection between IIRC language and that of other guideline bodies leads to underrating, especially by rating agencies. This is mainly because the rating agencies look for particular disclosures expressed in a particular "language". Therefore, the absence of those concepts leads to underrating. The IIRC has to adopt a more flexible approach where controversial concepts can be expressed in other common terminology utilised by guideline bodies.

- ❖ **IIRC needs to improve <IR> in order to suit companies in the service industry**

Some respondents asserted that as the first framework on <IR>, it is not perfect but is a good start. However, they felt it was more suitable for companies in the business of producing or buying and selling tangible stock and not necessarily for the companies buying and selling services. They are convinced that a lot can be done in order to cater for the service industry under <IR>, particularly to create the link between service companies and the different capitals. The same argument was raised in section 3.11.

❖ **<IR> has to be more compatible with the digital world and not necessarily the paper world**

Some of the respondents emphasised the importance of making <IR> more compatible with the digital world and not necessarily with the paper world. One of the respondents questioned how <IR> could maintain its relevance in the digital world and some even suggested the need for preparing a concise report in digital format.

❖ **What do users need to see in an IAR?**

Respondents from two companies believed that carrying out academic/professional research in order to establish what influential users need to see in the IAR would improve the quality of IARs. Questions such as: "do users attach more value to a company, which discloses more than that which it does not?" were raised. Despite the literature on user needs, companies are still unaware of what users require in IARs. The literature must be disseminated to companies so that they are informed on what users need to see in IARs. Furthermore, more local research needs to be done as the user needs from other jurisdictions might not necessarily reflect the needs of South African users. In other words, there seems to be little cooperation. Therefore, cooperation between academia and the industry may lead to better <IR>.

❖ **Proactively educate the decision makers for an improved buy-in of <IR>**

It was noted in section 7.3.2 that partial buy-in into <IR> by the decision makers in companies leads to poor quality <IR>. One of the respondents suggested that the IIRC should proactively educate the board of directors and the executive management about <IR> and its benefits. This would have a ripple effect of availing resources, both human and financial, which ultimately leads to high quality <IR>. Education may also be extended to the preparers or those who did not undertake further studies in either

<IR> or sustainability reporting.

❖ **More training on capitals and the business model**

As was noted under section 7.3.1, the six capitals and the business model are concepts that were construed to be difficult to understand. It is contended that if preparers are given training on the six capitals and the business model, this might improve the quality of <IR>. It is suggested that IIRC provides more training at low cost especially for smaller companies who are unable to fund it themselves. Training is required especially on how to draw linkages between capitals, the quantification of trade-offs between capitals and quantifying value creation.

Training should also be provided for the business model since all the respondents interviewed confirmed that they struggle with this construct particularly on distinguishing between outcomes and outputs. Having dwelt on the qualitative results from the interviews, attention is turned to unexpected results that unfolded as the study progressed.

7.4 Unexpected results

These are results, which were not initially part of the investigation plan as stipulated in the research objectives or research questions. However, these results warrant attention because they assist in the understanding of <IR> implementation. They are expounded below.

❖ **Disclosures on transformation in the IARs**

As the 400 IARs were being analysed, the researcher observed that companies are generally disclosing transformation, both qualitatively and quantitatively, in their IARs. However, de facto transformation remains unaccounted for. Many companies remain untransformed both in terms of directorships and in terms of shareholdings. The majority of shareholders and directors for the 400 IARs analysed are from the formerly advantaged race. It was also noted that some companies use sexist language as they still use the term "chairman". A more neutral and gender friendly term of "chairperson" could be used instead.

❖ **Need for an <IR> assessment document in the public domain**

Respondents from three of the five interviewed companies shared a view that there is an urgent need for an <IR> assessment document to be in the public domain. While Ernst & Young and other companies are involved in the evaluation of quality for IARs, their evaluation frameworks are not available to the public. This finding confirms the significance and relevance of this study, whereupon the polychotomous accountability index that was developed in this study will be availed for public consumption.

It is hoped that this becomes a modest contribution towards improved IRQ, especially for smaller companies who cannot afford high training fees. The polychotomous accountability index will help preparers to identify the elements that need to be disclosed and the depth or extend to which these disclosures must be made. Furthermore, the PAI will also assist in breaking down some of the constructs, which were construed by the respondents to be challenging, particularly the capitals and business model.

❖ **How many people read the IARs?**

Some of the respondents were interested to know if users, in fact, read the IARs that are prepared by their companies. Some respondents expressed doubt as to whether these IARs are considered for decision-making by investors and potential investors. These doubts come from a background of the high costs of producing IARs, particularly through human resource costs as they hire qualified personnel and train their employees in order to construct high quality IARs. The preparers are also concerned about the time they invest into producing IARs and whether the users' reading of the IARs is commensurate with their efforts. The respondents suggested the conducting of studies by academia or the profession in order to establish the readership of IARs. This result confirms the finding by McNally et al. (2017) who report that preparers are unconvinced that IARs are taken seriously by investors. They further argue that this contributes towards limiting an interconnection between sustainability performance and <IR>.

❖ **Taking an informal approach to reporting**

The number of companies adopting an informal approach to <IR> is increasing. This includes the use of videos to show some parts of an IAR. The reports are becoming

more like magazines with an increase in the number of pictures. One of the respondents noted:

> Every year we move progressively to have our report read more like a magazine and it is not as formal. There are lots of pictures, a lot of illustrations and lots of easy read as opposed to annual financial statements, which are formal on the regulatory side.

❖ **Rigid standards may fail to capture some of the activities undertaken by industries**

Some of the respondents from the interviewed companies argued that, when it comes to corporate reporting, rules have to be used with caution. If rules are chosen to guide a particular area of reporting, then the rules must cover all the potential reporting areas. A concern was raised where, in the manufacturing industry, the original disclosure rules did not have room for water that was taken back into a river system based on the wrong assumption that all water collected from the river system is used up in the process.

7.5 Summary and conclusions

The chapter addressed Objective 3 from Chapter 1, which reads, "To investigate the factors that contribute towards a change in <IR> quality". The findings reveal several factors, which contribute towards a change in IRQ. Some of the factors identified from the interviews are: some companies take <IR> seriously, teamwork, benchmarking, training, experience, addressing stakeholder needs, and first understanding the principles before implementing <IR>.

The chapter further addressed Objective 4, which reads, "To make suggestions and recommendations about <IR> by JSE listed companies in the light of research findings". Three questions were presented to interviewees in order to address this objective. These questions are listed below:

❖ What are the challenges (practical and theoretical) that you face in preparing IARs?

❖ What are the factors (in your opinion) that may have contributed to relatively low IRQ scores by companies that have low IRQ scores?

❖ Which changes do you think must be done to improve the <IR> framework and to improve <IR> in general?

The findings reveal challenges that are faced by preparers when preparing IARs. Some of the challenges identified are:

❖ difficulty in balancing between length and content of IARs (conciseness)

❖ difficulty in balancing different stakeholder needs

❖ making information comparable due to changes

❖ slow buy-in from the directors and executive management

❖ the balance between quality disclosures and giving away competitive information

❖ the business model and the six capitals are deemed difficult concepts

❖ securing consensus on the storyline to be told

❖ deliberate underreporting by competitors

❖ failure to meet the perceived expectations.

The second question to address Objective 4 reads, "What are the factors (in your opinion) that may have contributed to relatively lower IRQ scores by companies that have low IRQ scores?" Some of the factors are:

❖ understanding of <IR> is unclear by some preparers of IARs

❖ some entities do not see value in <IR>

❖ there is partial buy-in/incomplete embrace especially by the executive management

❖ there is a shortage of skills and resources

❖ outsourcing was identified to bring with it poor quality work

❖ some entities prefer to chase prestigious awards at the expense of the company's actual <IR> philosophy.

The third question to address Objective 4 reads, "Which changes do you think must be done to improve the <IR> framework and to improve <IR> in general?" It was noted

that some <IR> concepts and principles should be more synchronised so that they are not in conflict with each other. Secondly, some suggested the introduction of rules so that <IR> may be a blend of principles and rules as this could minimise preparer judgement. Thirdly, the IIRC must align its terminology with that of other guideline bodies, such as rating agencies to give more meaning to <IR>, which ultimately enables it to compete with already established reporting systems.

Fourthly, the IIRC needs to improve <IR> in order to suit companies in the service industry. The fifth change is that <IR> has to be more compatible with the digital world and not necessarily paper based. The sixth improvement is that more research must be done about what users need to see in IARs to enhance the relevance of the IAR for different stakeholders. The seventh suggestion is that the IIRC must proactively educate the decision makers for an improved buy-in of <IR> particularly in jurisdictions where uptake of <IR> is voluntary. Lastly, more training on capitals and business models should be conducted in order to improve the quality of reporting.

The last aspect to be addressed in the chapter is that of unexpected results. It was noted that de facto and de jure transformation in JSE listed companies still need to reach acceptable levels to represent the demographics of South Africa fairly. Furthermore, it was noted that there is a need for an <IR> assessment document in the public domain, which may assist companies in the practical implementation of the <IR> framework. Some of the respondents queried if, in fact, users read the IARs and if investing decisions are made based on the information in the IARs. It was further noted that more companies are adopting an informal approach to <IR> with an increased use of videos, pictures, graphs and other innovative non-numeric presentations. Lastly, it was noted that the use of rigid standards might fail to capture some of the activities undertaken by industries. Having drawn the summary and conclusions for Chapter 7, the last chapter of the study, Chapter 8 is presented below.

CHAPTER 8

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

The chapter begins by recapitulating the purpose of the study as was presented in Chapter 1. The main purpose of this explanatory sequential mixed methods study is to extend the extant literature by developing a weighted polychotomous accountability index (PAI). In the first quantitative phase, PAI data were collected from the companies' websites through the I-Net BFA database in order to establish the extent to which IARs prepared by the JSE listed companies are aligned to the <IR> framework. This was done by computing mean annual IRQ scores for the period 2013 to 2016. The mean annual IRQ scores were subjected to the Kruskal-Wallis test. The second qualitative phase was conducted as a follow-up to the quantitative results. In this explanatory follow-up, the study explored the factors that contributed towards a change in IRQ by JSE listed companies over the period 2013 to 2016. The explanatory follow-up also made suggestions about <IR> as implemented by JSE listed companies as informed by the research findings.

This chapter revisits the research problem presented in Chapter 1. It presents the summary of findings from the literature reviews, research methodology and the empirical evidence as presented in the data analysis chapters. Conclusions are drawn as informed by the data analysis results. Implications of these results are presented. The second last part of the chapter accentuates and reinforces the contributions of this study to the corpus of the science of accounting. Finally, the chapter highlights the summary and conclusions of the chapter and suggests areas of further research.

8.2 Research problem, research objectives/questions and research findings

The research problem is that it remains unanswered in the extant literature whether corporate accountability, through corporate reporting, has improved (extent and quality) under <IR> through improved integrated reporting quality (IRQ) scores since the mandating of <IR> in 2010 in South Africa. The research problem emanates from the absence of detailed research on the application of the <IR> framework (McNally &

Maroun, 2018). The research problem was addressed by addressing four objectives as summarised below.

Objective 1
(a) To develop an extensive weighted polychotomous accountability index to measure the extent and quality of <IR> disclosures by the JSE listed companies

From the draft PAI and with contributions and input from the <IR> experts through the Delphi Inquiry method, the researcher developed the weighted PAI (see Appendix A1 and A2 for the draft PAI and final PAI). The PAI has eight categories, 44 constructs, a maximum weight of 100% and a total score of 152 points. The eight categories are: organisational overview and external environment; governance; business model; risks and opportunities; strategy and resource allocation; performance; outlook; and basis of preparation and presentation.

The PAI has a six-point ordinal scoring system from "0" up to "5" where "0" means there is no disclosure at all, "1" means undetailed disclosure (pure narrative), "2" means detailed disclosure (pure narrative), "3" represents narrative and quantitative disclosures, and "4" represents narrative, quantitative and comparative disclosures, while represents individual scores up to a maximum of 5. Two outstanding features of the PAI are the inclusion of transformation and the use of a six-point ordinal scoring system.

Objective 2
(b) To investigate the feasibility and practicability of applying the polychotomous accountability index to selected JSE listed companies over the period 2013 to 2016

The findings show mean annual IRQ scores of 52.45%, 58.48%, 64.72%, and 68.29% for the period 2013 to 2016 respectively. The year-on-year IRQ scores are 6.03%, 6.24%, and 3.57% for the years 2014, 2015, and 2016 respectively. The highest IRQ scores are 66.45% (2013), 73.68% (2014), 78.95% (2015), and 88.82% (2016) while the lowest IRQ scores are 23.68% (2013), 26.97% (2014), 29.61% (2015), and 26.97% (2016). Sixty-seven companies (2013), 82 companies (2014), 90 companies (2014), and 92 companies (2016) attained IRQ scores above 50%. The implication is that a steady increase in mean annual IRQ scores for the JSE sample (over a four-year period) shows a significant increase in the extent and quality of <IR> disclosures.

Regarding the JSE sectoral analysis, the highest sectoral IRQ scores are 66.45%

(2013), 71.05% (2014), 75% (2015), and 81.25% (2016) while the lowest sectoral IRQ scores are 23.68% (2013), 40.13% (2014), 46% (2015), and 48.68% (2016). Furthermore, 18 out of 27 (2013), 24 out of 29 (2014), 28 out of 29 (2015), and 27 out of 28 (2016) recorded an IRQ score of over 50%. Conversely, 9 out of 27 (2013), 5 out of 29 (2014), 1 out of 29 (2015), and 1 out of 29 (2016) attained IRQ scores lower than 50%. The implication of the gradual increase in these numbers is that the overall quality of <IR> is improving over time.

Regarding the IRQ scores per industry, the highest IRQ scores are 66.45% (2013), 72.37% (2014), 70.72% (2015), and 75.99% (2016). The lowest IRQ scores per industry are 50.76% (2013), 55.09% (2014), 62.42% (2015), and 64.41% (2016). The range is 15.69% (2013), 17.28% (2014), 62.42% (2015), and 11.58% (2016). The implication from the gradual increase in the numbers is that the quality of IARs has been improving. Another inference to be drawn is that the industries that were falling behind are slowly catching up with the lead industries.

Despite the increasing trend of both symbolic and substantive <IR> practice, Haji and Anifowose (2016) caution that <IR> practice is largely ceremonial in nature meant only to acquire organisational legitimacy. Setia et al. (2015) express the same argument when they note that JSE listed companies are adopting legitimation strategies based on symbolic management when preparing IARs. As argued in section 6.6, the researcher maintains that an increase in IRQ scores represents an improvement in IRQ even if the preparers' intention is to please the principal (agency theory), to improve the decision-usefulness of IARs (decision-usefulness theory), to have their entity conform to societal, economic and political norms (political economy theory), to seek existential legitimacy (legitimacy theory), to adopt their entity's organisational form to bring legitimacy to the organisation (institutional theory) or to please different stakeholders (stakeholder theory). The researcher believes that the preparers' intentions are not very important. A positive change in IRQ scores (especially those arrived at using a polychotomous accountability index) represent an improvement in IRQ, whereas a negative change in the IRQ scores signifies a decrease in IRQ.

Objective 3
(c) To investigate the factors that contribute towards a change in <IR> quality

Through the semi-structured interviews conducted, several factors were identified that

contributed towards the current levels of IRQ by JSE listed companies. Some of the factors identified from the interviews are: some companies take <IR> seriously, teamwork, benchmarking, training, experience, addressing stakeholder needs, and understanding the principles before implementing <IR>. The implication of this finding is that companies, especially those that have low IRQ scores, have to adopt some of the factors expressed under this section.

Objective 4
(d) To make suggestions and recommendations about <IR> by listed companies in the light of research findings

This objective was addressed in the form of three questions that were presented to respondents and their responses are presented below. In order to propose meaningful suggestions and recommendations, there is need to be aware of the challenges being faced by preparers of IARs and of the factors why companies, which have low IRQ scores, are failing. The questions and the responses are therefore summarised below.

❖ **What are the challenges (practical and theoretical) that you face in preparing IARs?**

A number of challenges were conveyed by the respondents, which are: difficulty in balancing between length and content of IARs (conciseness); difficulty in balancing different stakeholder needs; making information comparable due to changes; slow buy-in from the directors and executive management; balance between quality disclosures and giving away competitive information; business model and the six capitals are deemed difficult concepts; difficulty in securing consensus on the storyline to be told; deliberate underreporting by competitors; and failure to meet the perceived expectations. These findings show that the IIRC has a lot to offer to those entities that have embraced <IR> in order to improve the practical implementation of <IR> in the form of continuous training initiatives and more guidance on the implementation of the <IR> framework. The interventions by the IIRC will have a positive effect on the quality of <IR> implementation. The second question and the responses are articulated below.

❖ **What are the factors (in your opinion) that may have contributed to relatively low IRQ scores by companies that have low IRQ scores?**

The essence of this question is that those organisations, which are producing high quality IARs, are also aware of why some entities are failing. The respondents suggested a number of factors, such as: understanding of <IR> is unclear by some preparers of IARs; some entities do not see value in <IR>; there is partial buy-in/incomplete embrace especially by the executive management; there is a shortage of skills and resources; outsourcing was identified to bring with it poor quality work; and some entities prefer to pursue prestigious awards at the expense of the company's actual <IR> philosophy. The implication of these findings is that the leadership of entities has to do more for the successful implementation of <IR> because it appears that most of the factors, which contribute towards relatively low IRQ scores, are centred on leadership willingness or lack of it. After the first and second questions have been answered, attention is turned to the last question, which includes the suggestions and recommendations.

❖ **Which changes do you think must be done to improve the <IR> framework and to improve <IR> in general?**

The intention of the question was to locate the areas, which are in need of adjustment to make the implementation of <IR> easier. The respondents advanced a number of propositions and suggestions to that effect that include: some <IR> concepts and principles should be more synchronised so that they are not in conflict with each other; the introduction of rules so that <IR> may be a blend of principles and rules as this could minimise preparer judgement while improving comparability of IARs; <IR> must align its terminology with that of other guideline bodies like rating agencies to give more meaning to <IR>, which ultimately enables it to compete with already established reporting systems; the IIRC needs to improve <IR> in order to suit companies in the service industry; <IR> has to be more compatible with the digital world and not necessarily paper based; more research must be done about what users need to see in IARs to enhance relevance of the IARs to different stakeholders; the IIRC must proactively educate the decision makers for an improved buy-in of <IR> particularly in jurisdictions where uptake of <IR> is voluntary; and more training on capitals and business models should be conducted in order to improve the quality of reporting. After addressing the objectives enunciated in section 1.4, the study notes that there are some crucial facts that were uncovered in the research process. These findings did

not form part of the research objectives but make the study richer and are presented in an abridged format below.

(e) **Unexpected results**

The findings reveal that de facto and de jure transformation in JSE listed companies still have to reach acceptable levels to fairly represent the demographics of South Africa. It was noted that there is need for an <IR> assessment document in the public domain to assist companies in the practical implementation of the <IR> framework. Some of the respondents queried whether users read the IARs and if investors' investing decisions are made, based on the information in the IARs. It was further mentioned that more companies are adopting an informal approach to <IR> with an increased use of videos, pictures, graphs and other innovative non-numeric presentations. Lastly, respondents felt that the use of rigid standards might fail to capture some of the activities undertaken by industries. The summary of chapters and research findings are now presented.

8.3 Summary of chapters

8.3.1 Chapter 1

The chapter articulated the background to the study, the problem statement, the research purpose, the research objectives, the research questions, the research methodology, limitations of the study, significance of the study, definition of terms, and an overview of chapters. This chapter notes the contributions made by this study to the body of accounting knowledge, which are:

- ❖ it identifies a methodology for developing the <IR> accountability index that reflects the quality of IARs and lays a foundation for further research.

- ❖ the construction of a weighted polychotomous accountability index that may be used to measure and evaluate the extent and quality of IARs.

- ❖ it is one of the first studies to provide empirical evidence regarding the application of the <IR> framework by JSE listed companies that enhances understanding on the practical implementation of <IR>.

- ❖ the identification of the qualitative factors that contribute towards the status quo and towards an increase or decline of IRQ over the four-year period.

❖ the study produces research findings and recommendations, which have the potential to improve <IR> and accountability by JSE listed companies.

8.3.2 Chapter 2

The chapter defined a theory and a theoretical framework. Different theories were articulated and evaluated. The theories through which <IR> could be perceived were analysed, i.e., the agency theory, decision-usefulness theory, political theory, legitimacy theory, institutional theory and stakeholder theory. A significant contribution from this chapter is that the stakeholder theory is the one best suited to inform an <IR> study. This position is informed by the fact that <IR> caters for all stakeholders in the broadest sense. The term stakeholders is not only limited to strategic and moral stakeholders; external and internal stakeholders; latent, expectant and definitive stakeholders; primary and secondary stakeholders; supportive, marginal, non-supportive, mixed blessing stakeholders; and single issue, and multiple stakeholders but also includes the environment, terrorists, blackmailers, and thieves.

8.3.3 Chapter 3

The chapter presented different forms of accountability, which were identified as political accountability, managerial/financial/corporate accountability, public accountability, professional accountability, and personal accountability. This study falls in the ambit of managerial/financial/corporate accountability and it was argued that this form of accountability could be traced back to 5000BC in the Babylonian era when only rulers were accountable. Reporting systems were developed, starting with financial reporting, balanced scorecard, triple bottom line, sustainability reporting and the current <IR>. It was contended that <IR> was developed out of the need to account properly to the ever changing needs of stakeholders that contributed to the subsequent development of financial reporting, balanced scorecard, triple bottom line, sustainability reporting, and <IR>.

A significant contribution of the chapter is the articulation of the content elements and the fundamental concepts of <IR> and the critique of <IR> that shows that work still needs to be done to have this form of reporting globally accepted. Some of the flaws of <IR> hamper its practical implementation by organisations. Another contribution of the chapter was to draw similarities and difference between <IR> and other reporting

systems, namely, financial reporting and sustainability reporting.

8.3.4 Chapter 4

This chapter continued with the review of related literature (which began in Chapter 3) by analysing the studies on <IR> to date. The studies were classified into seven categories, which are:

- ❖ conceptual studies that did not perform any data collection but rather a conceptual and academic analysis focusing on the different aspects of <IR>;

- ❖ empirical studies that investigate various constructs of <IR> that include investigating linkages between <IR> and integrated thinking. These included: interrelationships, which influence the ability of companies to create value for stakeholders; integrated thinking as a cultural control mechanism; how stakeholders interpret integrated thinking; the decision-usefulness of <IR>; the readability of IARs; a Luhmannian analysis of <IR>; and whether implementation of <IR> principles advance control systems;

- ❖ <IR> in the not-for-profit entities. Only two studies were identified under this category;

- ❖ economics-based archival studies. These studies are methodologically economics-based and fall in the category of capital markets research. These include studies that: investigate the value relevance of accounting information under <IR>; examine the economic consequences of IRQ; examine the impact of the Hofstede National Cultural System on <IR>; examine the influence of institutional factors on IARs; examine the association between <IR> and firm valuation; examine the factors associated with completeness and balance in <IR>; examine the association between <IR> disclosure quality and corporate governance mechanisms; and examine the relation between <IR> and the composition of a firm's investor base.

- ❖ case studies, which focus on why and how entities may adopt <IR>. Only two studies were analysed under this category;

- ❖ <IR> assurance. Some of the innovative studies attempted to develop an IAR assurance framework while others articulated the challenges faced by entities

attempting to assure their IARs;

❖ studies, which measure the level of <IR> quality. These studies: analyse the disclosure on areas of non-financial reporting by ASX companies; report on the long-term effects of <IR> on the quality of information; investigate the extent to which managers disclose intellectual capital in initial public offerings; examine the trend of <IR> following the introduction of <IR> in South Africa; examine how the absorption of <IR> and the embedded multiple capitals framework has influenced organisational reporting practice; explore how extinction prevention is currently being disclosed in the IARs; assess the quality of intellectual capital disclosure offered in <IR>; investigate the degree of accountability of <IR> disclosed by an Italian company; and investigate the benefits of <IR> to the capital market.

This chapter shows are that there is still a need for more research to be done especially on <IR> in not-for-profit studies, case studies on why and how entities adopt <IR>, and <IR> assurance. A significant contribution from this chapter is that more studies on IRQ make use of the dichotomous accountability index and therefore more studies need to be conducted, which utilise the polychotomous accountability index in order to measure and evaluate the extent and quality of <IR> disclosures. This therefore renders this study relevant as it attempts to fill that research gap.

8.3.5 Chapter 5

The chapter presented the research methodology of the study. The term "research methodology" was defined and the research design (explanatory sequential mixed methods) was explained. Thereafter, each research objective was matched with the research methods (used to achieve the objective) and any other major concepts. Under Objective 1, disclosure indices were addressed and the Delphi Inquiry, which informs the PAI construction, was presented. Under Objective 2, content analysis and typologies of content analysis were explained and emphasis was put on magnitude coding, descriptive coding and focused coding. Additionally, IRQ and disclosure quality proxies and the Kruskal-Wallis test were discussed.

Under Objective 3, different types of interviews were elaborated. These include unstructured interviews, structured interviews and semi-structured interviews.

Reliability and validity of interviews, audio recording, qualitative data analysis, research population and sampling were analysed in the chapter. For Objective 4, after constructing the PAI and testing its feasibility and practicability and after establishing the qualitative factors that contribute towards a change in IRQ, suggestions and recommendations about <IR> by listed companies were made.

8.3.6 Chapter 6

The chapter presented the results from the quantitative data analysis procedures. For Objective 1, the PAI was constructed and has 44 constructs, with a possible total score of 152 points and with a total weight of 100% (see Appendix A1 and A2 for detailed draft PAI and final PAI). For Objective 2, the mean annual IRQ scores were obtained as 52.45% for 2013, 58.48% for 2014, 64.72% for 2015, and 68.29% for 2016. Furthermore, the highest IRQ scores were calculated to be 66.45% for 2013, 73.68% for 2014, 78.95% for 2015, and 88.82% for 2016. The lowest IRQ scores were calculated as 23.68% for 2013, 26.97% for 2014, 29.61% for 2015, and 26.97% for 2016.

The JSE sector-related results are: 2013–the highest IRQ score of 66.45%, 2014–the highest IRQ score of 71.05%, 2015–the highest IRQ score of 75% and 2016 has the highest IRQ of 81.25%. The industry-related results are as follows: 2013–the highest IRQ score of 66.45%, 2014–the highest IRQ score of 72.37%, 2015–the highest IRQ score of 70.72% and 2016–the highest IRQ score of 75.99%.

The last to be analysed under Objective 2 was the Kruskal-Wallis test where the results show that there are statistically insignificant differences between industry IRQ scores for the years 2013, 2014, and 2015. However, 2016 shows statistically significant differences between industry IRQ scores, where the manufacturing industry has the lowest IRQ score (64.41%), while the transport, storage and communication industry has the highest IRQ score (75.99%).

8.3.7 Chapter 7

The chapter presented the results from the qualitative data analysis procedures particularly to address Objective 3. Factors found to be contributing to relatively higher IRQ scores for JSE listed companies are: teamwork, benchmarking, training,

experience, taking <IR> seriously, and addressing stakeholder needs. To address Objective 4, three different questions were presented to the respondents. The first question pertained to the challenges (practical and theoretical) faced by the preparers of IARs. These include: difficulty in balancing between length and content of IARs (conciseness); difficulty in balancing different stakeholder needs; making information comparable is difficult due to changes; slow buy-in from the directors and executive management; balance between quality disclosures and giving competitive information; business model and the six capitals are deemed difficult concepts; difficulty is securing consensus on the storyline to be told; deliberate underreporting by competitors; and failure to meet the perceived expectations.

The second question to address Objective 4 pertained to the factors that contributed to relatively lower IRQ scores by companies that have low IRQ scores. Some of the factors are: understanding of <IR> is unclear by some preparers of IARs; some entities do not see value in <IR>; there is partial buy-in/incomplete embrace especially by the executive management; there is a shortage of skills and resources; outsourcing brought poor quality work; and some entities prefer to chase prestigious awards at the expense of the company's actual <IR> philosophy.

The third and last question to address Objective 4 pertains to the changes and suggestions proposed in order to improve the <IR> framework and the <IR> in general. It was noted that, first, some <IR> concepts and principles should be more synchronised so that they are not in conflict with each other. Second, some suggested the introduction of rules so that <IR> may be a blend of principles and rules to minimise preparer judgement. Third, <IR> must align its terminology with that of other guideline bodies like rating agencies to give more meaning to <IR>, which ultimately enables it to compete with already established reporting systems. Fourth, the IIRC needs to improve <IR> in order to suit companies in the service industry. Fifth, <IR> has to be more compatible with the digital world and not necessarily paper based. Sixth, more research must be done about what users need to see in IARs to enhance relevance of the IAR for different stakeholders. Seven, a suggestion is that the IIRC must proactively educate the decision makers for an improved buy-in of <IR>, particularly in jurisdictions where uptake of <IR> is voluntary. Lastly, more training on capitals and business models should be conducted in order to improve the quality of reporting.

The last construct to be presented was that of unexpected results. It was noted that de facto and de jure transformation in JSE listed companies still have a long way to go in order to reach acceptable levels to fairly represent the demographics of South Africa. It was also noted that there is need for an <IR> assessment document in the public domain, which may assist companies in the practical implementation of the <IR> framework. Some respondents were interested to know if, in fact, users read the IARs and whether investors' investing decisions are made based on the information in the IARs. It was further noted that more companies are adopting an informal approach to <IR> with an increased use of videos, pictures, graphs and other innovative non-numeric presentations. Lastly, it was noted that the use of rigid standards might fail to capture some of the activities undertaken by industries.

8.4 Conclusions

The overall goal of this explanatory sequential mixed methods study was to extend the extant literature by developing a weighted polychotomous accountability index. This was an attempt to address the research problem as it remains unanswered in the extant literature whether corporate accountability, through corporate reporting, has improved (extent and quality) of <IR> through improved integrated reporting quality (IRQ) scores. In the first quantitative phase, the PAI data was collected from the companies' websites through the I-Net BFA database in order to establish the extent to which IARs prepared by the JSE listed companies are aligned to the <IR> framework. Through the Delphi Inquiry method, the final PAI was constructed and has eight categories, with 44 constructs and a total score of 152 points and a cumulative 100% weighting. It was noted that IRQ scores by Top 100 JSE listed companies are gradually improving, which means that corporate accountability through <IR> is also improving. This finding extends the stakeholder theory in that when entities produce IARs, they are actually improving corporate accountability by going beyond the simple economic or financial performance disclosures through a detailed disclosure of intellectual capital, human capital, manufactured capital, natural, and social and relationship capital disclosures.

The second qualitative phase was conducted as a follow up to the quantitative results to explain the quantitative results. This explanatory follow-up explored the factors that

contributed towards a change in IRQ by JSE listed companies over the period 2013 to 2016. These factors, among others, include teamwork, benchmarking, training, experience, taking <IR> seriously, and addressing stakeholder needs.

Some of the challenges encountered in implementing <IR> are: difficulty in balancing between length and content of IARs (conciseness); difficulty in balancing different stakeholder needs; making information comparable is difficult due to changes; slow buy-in from the directors and executive management; balance between quality disclosures and giving away competitive information; business model and the six capitals are deemed difficult concepts; difficulty in securing consensus on the storyline to be told; deliberate underreporting by competitors; and failure to meet the perceived expectations.

Some of these findings extend the stakeholder theory while some challenge the stakeholder theory. In particular, the slow buy-in from the directors and executive management extends managerial branch of the stakeholder theory in that the management are only happy with the financial statements which are adequate to inform providers of capital, hence their slow buy-in to adopt and implement <IR>. On the other the difficulty in balancing different stakeholder needs challenges is evidence that the stakeholder theory is rather difficult to implement because the different stakeholder have different needs and resultantly the optimal balance is not easy to achieve.

In establishing why some companies are not doing well, the following factors were identified: that understanding of <IR> is unclear to some preparers of IARs; some entities do not see value in <IR>; in some cases, there is partial buy-in/incomplete embrace especially by the executive management; in some cases, there is a shortage of skills and resources; in other cases, outsourcing was identified to bring with it poor quality work; and some entities prefer to chase prestigious awards at the expense of the company's actual <IR> philosophy.

Of particular interest is point where entities do not see value in fully implementing <IR>. This finding rather supports the managerial branch of the stakeholder theory in that entities are satisfied with merely presenting financial reports which fulfil the needs

of only financial capital providers. This is done at the expense of providing other non-financial information which relates to intellectual capital, human capital, manufactured capital, natural, and social and relationship capital disclosures which fundamentally benefits other stakeholders other than the providers of capital

In establishing how <IR> implementation could be improved, suggestions were: that some <IR> concepts and principles should be more synchronised so that they are not in conflict with each other; the introduction of rules so that <IR> may be a blend of principles and rules to minimise preparer judgement; <IR> must align its terminology with that of other guideline bodies like rating agencies to give more meaning to <IR> that enables it (<IR>) to compete with already established reporting systems; the IIRC needs to improve <IR> in order to suit companies in the service industry; <IR> has to be more compatible with the digital world and not necessarily paper based; more research must be done about what users need to see in IARs to enhance relevance of the IAR for different stakeholders; the IIRC must proactively educate the decision makers for an improved buy-in of <IR> particularly in jurisdictions where uptake of <IR> is voluntary; and more training on capitals and business models should be conducted in order to improve the quality of reporting since these are perceived to be difficult concepts. The suggestions advanced above will improve the quality of IARs, which ultimately advances the stakeholder theory by improving the understandability of IARs through the intellectual capital, human capital, manufactured capital, natural, and social and relationship capital disclosures.

8.5 Recommendations from the study
❖ The following twelve recommendations are made:

❖ The study presents a PAI, which may be utilised for measuring and evaluating the extent and quality of <IR> implementation. This PAI involves the addition of transformation in South Africa but this element is not included in any of the studies evaluated. The researcher believes that it will add more richness to <IR> studies in South Africa. The PAI uses the six-point scoring system (0 to 5) and this is considered broad enough to capture the extent and quality of <IR> adequately. This construct will extend the stakeholder theory by availing a framework which can be used to measure the quality of IARs, which ultimately

improves the quality of financial capital, intellectual capital, human capital, manufactured capital, natural, and social and relationship capital disclosures available to all stakeholders.

❖ The steady increase in the mean IRQ scores for 2013, 2014, 2015, and 2016 shows that there is significant improvement in the extent and quality of IARs produced by the JSE listed companies. Reasons for this include: taking <IR> seriously by preparers, teamwork, benchmarking, training, experience, addressing stakeholder needs and understanding the principles before implementing <IR>. If companies need to improve the quality of their IARs, then they need to consider implementing some of the factors that contribute to the success of <IR>. Some of the reasons extend the stakeholder theory particularly the one where preparers of IARs strive to address stakeholder needs and understanding <IR> principles before fully implementing <IR>. This shows that entities strive to avail detailed financial and non-financial information to all their stakeholders, thus in essence extending the ethical branch of the stakeholder theory.

❖ Some companies fail to produce high quality IARs due to a number of factors that include: an inadequate understanding of <IR> by some preparers of IARs; some entities do not see value in preparing quality IARs; partial buy-in especially by the executive management; a paucity of skills and resources; outsourcing results in poor quality work; and some entities prefer to chase prestigious awards at the expense of the company's actual <IR> philosophy hampering the quality of IARs in the process. Some of the factors challenge the stakeholder theory particularly the one relating to partial buy-in of <IR>. Partial buy-in is because the management is satisfied with only financial statements which show disclosures that meet the needs of financial capital providers at the expense of other stakeholders, thus in essence, extending the managerial branch of the stakeholder theory.

❖ It was noted that some <IR> concepts and principles should be more synchronised so that they are not in conflict with each other.

❖ The introduction of rules so that <IR> may be a blend of principles and rules as this could minimise preparer judgement.

- The IIRC must align its terminology with that of other guideline bodies like rating agencies to give more meaning to <IR>, which ultimately enables it to compete with already established reporting systems.

- The IIRC needs to improve <IR> in order to suit companies in the service industry since, as it stands, <IR> is more suitable for profit making entities. These recommendations directly relate to the IIRC in order to improve <IR> implementation.

- <IR> has to be more compatible with the digital world and not necessarily paper based.

- More research must be done about what users need to see in IARs to enhance its relevance for different stakeholders. This recommendation extends the ethical branch of the stakeholder theory in that preparers of IARs would have the requirements of all stakeholders, hence prepare IARs which fulfil those needs.

- The IIRC must proactively educate the decision makers for an improved buy-in of <IR> particularly in jurisdictions where uptake of <IR> is voluntary.

- More training on capitals and business models should be conducted in order to improve the quality of reporting since these two constructs are perceived to be complex and difficult to implement especially through quantification. Arguably, this point also extends the moral branch of stakeholder theory in that the need for more training improves the quality of available information to all stakeholders, which improves the stakeholders' decision-making abilities.

- It is noted that de facto and de jure transformation remains theoretical without substantial changes. It is recommended that the government and the JSE consider the nature of current disincentives since these disincentives seem not so effective to challenge the status quo. South African <IR> implementation monitoring authorities need to improve their monitoring capacity as this will have a direct impact on how companies implement the transformation construct. This recommendation extends the managerial branch of the stakeholder theory in that transformation is a construct which is being pursued by the government. Therefore, compliance with BBBEE legislation by

companies confirms the notion that managers mainly focus on the expectations and needs of the stakeholders who have influential power in the organisation (in this case the needs of the government).

8.6 Contributions of this study to the science of accounting

The study contributes to the non-financial disclosure corpus in a number of ways. Firstly, the study identifies a methodology suitable for constructing a polychotomous accountability index as opposed to a dichotomous index. The methodology reflects the extent and quality of IARs and lays a foundation for further development. The second contribution is the polychotomous accountability index, which was developed to evaluate and measure the extent and quality of IARs.

The third contribution is that it is one of the first studies to provide empirical evidence regarding the application of the <IR> framework by JSE listed companies that enhances understanding on the practical implementation of <IR>. The fourth contribution is the provision of qualitative factors, which explain the improvement of IRQ scores over the four-year period. The fifth contribution is the revelation of factors that could explain why companies which have low IRQ scores, are failing to produce high quality IARs. The sixth contribution is the suggestions to improve <IR> disclosures and <IR> in general. The seventh contribution is, by combining Delphi Inquiry, content analysis and interviews, using two disparate methodologies, the findings become richer as the results from one method are used to explain the results from the other. The eighth contribution is the identification of further research areas, such as the quality of <IR> particularly focusing on extinction accounting. The last contribution is the production of research findings that have the potential to improve <IR> implementation, <IR> in general and accountability by JSE listed companies.

8.7 Recommendations for further research

An area that needs further investigation is the establishment of the extent and quality of extinction accounting disclosures within the IAR. The main purpose is to establish whether the <IR> framework gives adequate provisions for extinction accounting. Secondly, a comparative analysis between an <IR> mandated jurisdiction and one that has adopted <IR> voluntarily in order to determine the effect of <IR >mandating on the quality of IARs. The third area of future research pertains to the PAI weighting,

which needs improvement since the simplified version of weighting was adopted in this study. This could be opinion based or statistical based weighting. Further feasibility testing is required to confirm reliability and validity of the PAI. The fourth area is the implementation of <IR> in the not-for-profit entities that appears to be under researched. The fifth area of research relates to establishing the quantitative factors, which explain the degree of <IR> implementation by JSE listed companies. This emanates from the fact that this study addressed the qualitative factors only, which contribute towards an increase in IRQ scores. Lastly, as pointed out in Section 7.4, future studies may consider investigating whether users of IARs do in fact read the IARs before undertaking investment decisions. This point arises from the interviewed respondents who cast some doubt on whether their IARs are in fact being read or that their efforts are in vain.

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Appendix A1: Draft Polychotomous Accountability Index (before input from the Delphi panellists)

1.ORGANISATIONAL OVERVIEW AND EXTERNAL ENVIRONMENT		Total Score 19
What does the organisation do and what are the circumstances under which it operates?		
Construct	**Score Elements**	
1.1. Mission and vision	**0**=no statement **1**=for mission or vision statement **2**=mission and vision statements **3**=detailed mission and vision including sustainability and long-term topics	3
1.2. Competitive landscape, market positioning and positioning within value chain	**0**=no disclosure **1** mark for each=competitive landscape, market positioning, positioning within value chain (maximum of **3**); **1** mark each for market positioning and positioning within value chain (maximum of **2**)	5
1.3. Key quantitative information: employees, revenue, locations, significant changes in prior years l	**1** mark for each element (maximum of **3**)=number of employees, turnover, locations and material changes from prior periods	3
1.4. Operation context	**1** mark for each element (maximum of **8**)=legal, commercial, social, environmental, political, technological developments; and important laws, stakeholder needs that affect the entity's ability to create value in the long, medium and short term	8

2. GOVERNANCE		Total Score 11
What is the entity's governance architecture and how does the entity support its ability to create value in the short, medium and long term?		
Construct	**Scoring Element**	
2.1. **Governance and strategic decisions- actions undertaken to monitor and influence strategic direction and risk management**	**0**=no actions determinable from narratives; **1**=disclosure of determinable actions; **1**=existence of a risk committee; **1**=link between governance and strategy; **1**=detailed discussion of risk management process	4
2.2. **Reflection of organisational culture, ethics and values in use of and effect on capitals, relationship with key stakeholders**	**0**=no mention; **1**=narrative relating to culture, values and ethics in a given context; **2**=detailed narrative on how culture, values and ethics relate to capitals and key stakeholders; **3**=detailed narrative and quantitative disclosure on how culture, values and ethics relate to capitals and key stakeholders	3
2.3. **Link between remuneration (incentives), and value creation in the short, medium and long term; link between remuneration (incentives), and organisation's use of and effects on capitals**	**0**=no mention; **1**=undetailed remuneration policy; **2**=detailed remuneration policy including performance indicators; **3**=detailed remuneration policy including both financial and non-financial performance indicators	4

3. BUSINESS MODEL		Total Score
What are the entity's inputs, business activities, outputs and outcomes?		**Score**
Construct	**Score elements**	**12**
3.1. Major variables of the business model	**0**=no mention **1** mark for the diagram **1** mark for each for disclosure of input, business activity, output and outcome (maximum of 4)	5
3.2. Stakeholder dependencies	**0**=no mention **1**=undetailed discussion of stakeholder dependencies **2**=detailed discussion of stakeholder dependencies **3**=detailed discussion of stakeholder dependencies and key value drivers **4**=detailed discussion of stakeholder dependencies, key value drivers and major factors affecting the external environment	4
3.3. Connectivity between business model and other content elements	**0**=no connection **1**=connectivity to 1 or 2 elements **2**=connectivity to 3 or 4 elements **3**=connectivity to 5 or 6 elements	3

4. **RISKS AND OPPORTUNITIES**		**Total Score 10**
What are the risks and opportunities that affect an entity's ability to create value in the short, medium and long term?		
Construct	**Score Element**	
4.1. Major risks including Key Risk Indicators (KRIs)	**0**=no mention **1**=undetailed disclosure on major risks **2**=detailed disclosures on major risks and KRIs **3**=detailed narrative and quantitative disclosures on major risks and KRIs **4**=detailed narrative, quantitative and comparative disclosures on major risks and KRIs	4
4.2. Major opportunities	**0**=no mention **1**=undetailed disclosures on major opportunities **2**=detailed disclosure on major opportunities **3**=detailed narrative and quantitative disclosures on major opportunities **4**=detailed narrative, quantitative and comparative disclosures on major opportunities	4
4.3. Assessment of the likelihood of occurrence of risk or opportunity and magnitude of effects	**0**=no assessment **1** mark each for the assessment of likelihood of risks and magnitude of effects	2

5. STRATEGY AND RESOURCE ALLOCATION		Total Score 14
Where does the entity want to go and how does it intend to get there?		
Construct	**Scoring Elements**	
5.1. Strategic objectives	**0**=no mention **1** mark each for short term, medium term and long term strategic objectives (total of **3**) **1** extra mark for a detailed discussion of all the medium and long term strategic objectives	4
5.2. Competitive advantage as influenced by innovation, intellectual capital, environmental and social considerations	**0**=no mention; **1**=undetailed disclosure; **2**=detailed narrative disclosures; **3**=detailed narrative and quantitative disclosures **4**=detailed narrative, quantitative and comparative disclosures;	4
5.3. Stakeholder consultations performed in formulating strategy and resource allocation plan	**0**=no disclosure; **1**=undetailed disclosures on the level of consultation; **2**=detailed narrative disclosures on the level of consultation; **3**=detailed narrative and quantitative disclosures on the level of consultation	3
5.4. Link between strategy and information from other content elements (examples include business model, performance, resource allocation plan, risks, opportunities etc.)	**0**=no link; **1**=link with one or two elements; **2**=link with three or four elements; **3**=link with more than four elements	3

6. PERFORMANCE		Total Score 14
To what extent has the entity performed against its strategic objectives, and what are its outcomes in terms of effects on capitals?		
Construct	**Scoring Elements**	
6.1. **Key Performance Indicators (KPIs):** KPIs relate targets, risks and opportunities and have to cover a number of periods and industry benchmarks	**0**=no mention **1**=narrative disclosures **2**=narrative and quantitative (financial) disclosures **3**=narrative and quantitative (financial and non-financial) disclosures **4**=detailed narrative, quantitative and comparative disclosures	4
6.2. **Explanation of KPIs:** explanations encompass the definition, significance, implications, methods and assumptions used in compiling KPIs	**0**=no explanation **1**= definitions **1**=significance **1**=implications **1**=methods used in compiling KPIs	4
6.3. **Entity's effects on capitals:** financial, manufactured, intellectual, human, social and relationship, and natural	**0**=no mention **1**=undetailed narrative disclosures of relevant capitals **2**=detailed narrative disclosures of relevant capitals **3**=detailed narrative and quantitative disclosures of relevant capitals	3
6.4. **Past, current and future performance:** linkages between past and current performance, and between performance and the entity's outlook	**0**=no disclosure **1**=narrative disclosures **2**=narrative and quantitative (financial) disclosures **3**=narrative and quantitative (financial and non-financial) disclosures	3

7. OUTLOOK		Total Score 8
What challenges and uncertainties are likely to be encountered by the entity when pursuing its strategy and what are the potential implications for its business model and future performance?		
Construct	**Scoring Element**	
7.1. **Expected changes:** the entity's anticipated changes of the operating context, risks and opportunities in the short, medium and long term. Changes could be critical challenges and uncertainties (usually found in the Chairman/CEO/CFO's review)	**0**=no mention **1**=undetailed narrative disclosure **2**=detailed narrative disclosures incorporating medium and long term future **3**=detailed narrative and quantitative disclosures incorporating medium and long term future	3
7.2. **Potential implications**: refer to how the anticipated changes will affect the entity and this includes a discussion of the availability, quality and affordability of capitals affected/ used by an entity (e.g., the continued availability of skilled labour or natural resources) including how key relationships are managed and why they are important to the entity's ability to create value over time.	**0**=no mention **1**=undetailed narrative disclosures **2**=detailed narrative disclosures **3**=detailed narrative and quantitative disclosures	3
7.3. **Estimates:** lead indicators for outlook. Examples include forecasts and projections, targets, sensitivity analyses, estimates of KPIs or objectives, KRIs, relevant information from recognised external sources, and significant assumptions	**0**=no mention **1**=forecasts, projections, targets, sensitivity analyses, estimates of KPIs and KRIs on financial indicators **2**=forecasts, projections, targets, sensitivity analyses, estimates of KPIs and KRIs on financial and non-financial indicators	2

8. BASIS OF PREPARATION AND PRESENTATION		Total Score 9
How does the entity determine what elements to include in the integrated report and how such matters are evaluated or quantified?		
Construct	**Scoring Element**	
8.1. **Materiality determination process:** this entails identification of relevant matters depending on their potential and ability to affect value creation; evaluating the importance of all relevant matters based on their potential effect on value creation; presenting matters based on their relative importance; and determination of information that is deemed material	**0**=no mention **1**=identification of materially relevant matters **2**=narrative disclosures evaluating the importance of relevant matters **3**=narrative disclosures evaluating the importance of relevant matters, and prioritisation of important matters **4**=narrative and quantitative disclosures evaluating the importance of relevant matters, and prioritisation of important matters	4
8.2. **Frameworks and methods used in the materiality determination process:** summary of significant frameworks and methods used to enhance consistency and comparability	**0**=no mention of frameworks and methods **1**=undetailed narratives on frameworks and methods **2**=detailed narratives on frameworks and methods	2
8.3. **Reporting boundary:** Material risks, opportunities and outcomes associated with entities/stakeholders included in the IARs	**0**=no reporting boundary **1**=narrative on reporting boundary **2**=detailed explanation on how reporting boundary was determined **3**=detailed explanation on the determination of reporting boundary, and mentioning of material risks, opportunities and outcomes associated entities/stakeholders presented in the IAR.	3

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Appendix A2: Polychotomous Accountability Index

1. ORGANISATIONAL OVERVIEW AND EXTERNAL ENVIRONMENT		Total Score
What does the organisation do and what are the circumstances under which it operates?		Score
Construct	**Score Elements**	**25**
1.1. Mission/ purpose and vision/ambition	**0**=no statement **1**=for mission or vision statement **2**=mission and vision statements **3**=detailed mission and vision including sustainability and long-term topics	3
1.2. Culture, value and ethics/philosophy	**0**=no mention **1**=remarks on observance of values and ethics **2**=existence of a code of conduct, list of values	2
1.3. Ownership and operating structure	**0**=no mention **1**=pure narrative on ownership and operating structure **2**=narrative and quantitative disclosure of ownership and operating structure	2
1.4. Competitive landscape, market positioning and positioning within value chain	**0**=no disclosure **1** mark for each=competitive landscape, market positioning, positioning within value chain (maximum of **3**); **1** mark each for a comparative for prior period(s) of the competitive landscape, market positioning and positioning within value chain (maximum of **3**)	6
1.5. Key quantitative information: employees, revenue, locations, significant changes in prior years and B-BBEE level	**1** mark for each element (maximum of **4**)=number of employees, turnover, locations and material changes from prior periods	4
1.6. Operation context	**1** mark for each element (maximum of **8**)=legal, commercial, social, environmental, political, technological developments; and important laws, stakeholder needs that affect the entity's ability to create value in the long, medium and short term	8

2 GOVERNANCE		Total Score 18
What is the entity's governance architecture and how does the entity support its ability to create value in the short, medium and long term?		
Construct	**Scoring Element**	
2.1. Leadership structure	**0**=no mention of leadership structure; **1**=disclosure of Board of Directors and relevant committees; **2**=detailed disclosure of skills and diversity including backgrounds, gender, competence and experience	2
2.2. Governance and strategic decisions- actions undertaken to monitor and influence strategic direction and risk management	**0**=no actions determinable from narratives; **1**=disclosure of determinable actions; **1**=existence of a risk committee; **1**=link between governance and strategy; **1**=detailed discussion of risk management process	4
2.3. Reflection of organisational culture, ethics and values in use of and effect on capitals, relationship with key stakeholders	**0**=no mention; **1**=narrative relating to culture, values and ethics in a given context; **2**=detailed narrative on how culture, values and ethics relate to capitals and key stakeholders; **3**=detailed narrative and quantitative disclosure on how culture, values and ethics relate to capitals and key stakeholders	3
2.4. Governance practices exceed legal requirements	**0**=no mention; **1**=below/at par with legal requirements; **2**=above legal requirements	2
2.5. Promotion and enabling of innovation	**0**=no mention; **1**=undetailed disclosures (pure narrative) relating to promotion and enabling of innovation; **2**=detailed disclosure (pure narrative) relating to promotion and enabling of innovation **3**=detailed narrative and quantitative disclosures relating to promotion and enabling of innovation	3
2.6. Link between remuneration (incentives), and value creation in the short, medium and long term; link between remuneration (incentives), and organisation's use of and effects on capitals	**0**=no mention; **1**=undetailed remuneration policy; **2**=detailed remuneration policy including performance indicators; **3**=detailed remuneration policy including both financial and non-financial performance indicators; **4**=detailed remuneration policy including both financial and non-financial performance indicators, and comparatives with other years' CARs.	4

3. BUSINESS MODEL		Total Score
What are the entity's inputs, business activities, outputs and outcomes?		
Construct	**Score elements**	**17**
3.1. Major variables of the business model	**0**=no mention **1** mark for the diagram **1** mark for each for undetailed disclosure of input, business activity, output and outcome **2** marks each for a detailed disclosure of input, business activity, output and outcome	7
3.2. Narrative flow of the business model	**0**=no flow **1**=fairly logical flow **2**=good flow	2
3.3. Stakeholder dependencies	**0**=no mention **1**=undetailed discussion of stakeholder dependencies **2**=detailed discussion of stakeholder dependencies **3**=detailed discussion of stakeholder dependencies and key value drivers **4**=detailed discussion of stakeholder dependencies, key value drivers and major factors affecting the external environment	4
3.4. Connectivity between business model and other content elements	**0**=no connection **1**=connectivity to 1 or 2 elements **2**=connectivity to 3 or 4 elements **3**=connectivity to 5 or 6 elements **4**=connectivity to 7 or 8 elements	4

4. RISKS AND OPPORTUNITIES		Total Score 14
What are the risks and opportunities that affect an entity's ability to create value in the short, medium and long term?		
Construct	**Score Element**	
4.1. Major risks including Key Risk Indicators (KRIs)	**0**=no mention **1**=undetailed disclosure on major risks **2**=detailed disclosures on major risks and KRIs **3**=detailed narrative and quantitative disclosures on major risks and KRIs **4**=detailed narrative, quantitative and comparative disclosures on major risks and KRIs	4
4.2. Major opportunities	**0**=no mention **1**=undetailed disclosures on major opportunities **2**=detailed disclosure on major opportunities **3**=detailed narrative and quantitative disclosures on major opportunities **4**=detailed narrative, quantitative and comparative disclosures on major opportunities	4
4.3. Assessment of the likelihood of occurrence of risk or opportunity and magnitude of effects	**0**=no assessment **1** mark each for; -assessment of likelihood of risks -the impact of that risk on the entity -assessment of likelihood of occurrence of opportunity -impact of that opportunity on the entity	4
4.4. Steps to mitigate/manage risk or capitalise on the opportunity	**0**=no mention **1** mark for the measures to mitigate risks **1** mark for the measures to capitalise on opportunities	2

5. STRATEGY AND RESOURCE ALLOCATION		Total Score 25
Where does the entity want to go and how does it intend to get there?		
Construct	**Scoring Elements**	
5.1. Strategic objectives	**0**=no mention; **1** mark each for short term, medium term and long term strategic objectives (total of **3**); **1** extra mark for a detailed discussion of all the medium and long term strategic objectives	4
5.2. Strategy implementation plan as per business model	**0**=no plan; **1**=undetailed plan; **2**=detailed plan: purely narrative disclosures; **3**=detailed plan: narrative and quantitative disclosures	3
5.3. Resource allocation plan as per business model	**0**=no plan; **1**=undetailed plan; **2**=detailed plan: purely narrative disclosures; **3**=detailed plan: narrative and quantitative disclosures; **4**=detailed plan: narrative, quantitative and comparative disclosures	4
5.4. Measurement criteria for achievements and target outcomes in the short, medium and long term	**0**=no measurement criteria; **1**=undetailed measurement criteria; **2**=detailed measurement criteria: purely narrative disclosures; **3**=detailed plan: narrative and quantitative disclosures; **4**=detailed plan: narrative, quantitative and comparative disclosures	4
5.5. Competitive advantage as influenced by innovation, intellectual capital, environmental and social considerations	**0**=no mention; **1**=undetailed disclosure; **2**=detailed narrative disclosures; **3**=detailed narrative and quantitative disclosures **4**=detailed narrative, quantitative and comparative disclosures;	4
5.6. Stakeholder consultations performed in formulating strategy and resource allocation plan	**0**=no disclosure; **1**=undetailed disclosures on the level of consultation; **2**=detailed narrative disclosures on the level of consultation; **3**=detailed narrative and quantitative disclosures on the level of consultation	3
5.7. Connectivity between strategy and information from other content elements (examples include business model, risks, opportunities etc.)	**0**=no connectivity; **1**= connectivity with one or two elements; **2**= with three or four elements; **3**= connectivity with more than four elements	3

6. PERFORMANCE		Total Score 23
To what extent has the entity performed against its strategic objectives, and what are its outcomes in terms of effects on capitals?		
Construct	**Scoring Elements**	
6.1. Key Performance Indicators (KPIs): KPIs relate targets, risks and opportunities and have to cover a number of periods and industry benchmarks	**0**=no mention **1**=narrative disclosures **2**=narrative and quantitative (financial) disclosures **3**=narrative and quantitative (financial and non-financial) disclosures **4**=detailed narrative, quantitative and comparative disclosures	4
6.2. Explanation of KPIs: explanations encompass the definition, significance, implications, methods and assumptions used in compiling KPIs	**0**=no explanation **1**= definitions **1**=significance **1**=implications **1**=methods used in compiling KPIs **1**=assumptions used in compiling KPIs	5
6.3. Entity's effects on capitals: financial, manufactured, intellectual, human, social and relationship, and natural	**0**=no mention **1**=undetailed narrative disclosures of relevant capitals **2**=detailed narrative disclosures of relevant capitals **3**=detailed narrative and quantitative disclosures of relevant capitals **4**=detailed narrative, quantitative and comparative disclosures of relevant capitals	4
6.4. Stakeholder relationships: state of the key stakeholders relationships and how the entity has responded to stakeholders' legitimate needs and interests	**0**=no mention **1**=undetailed disclosures on the quality/nature of relationships **2**=undetailed disclosures on the quality/nature of relationship and how the entity responded to the legitimate needs. **3**=detailed disclosures on the quality/nature of relationship and how the entity responded to the legitimate needs.	3

6.5. Past, current and future performance: linkages between past and current performance, and between performance and the entity's outlook	**0**=no disclosure **1**=narrative disclosures **2**=narrative and quantitative (financial) disclosures **3**=narrative and quantitative (financial and non-financial) disclosures	3
6.6. Connectivity and financial implications: Connectivity (causal relationships) between financial performance with key economic, environmental and social information from other content elements (e.g., ratio of greenhouse gas emissions to sales; effects of energy efficiency on cost reduction; effects of enhancement of human capital on expected revenue growth; effects of labour unions on profitability)	**0**=no mention **1**=undetailed disclosures **2**=detailed narrative or quantitative disclosures **3**=detailed narrative and quantitative disclosures **4**=detailed narrative, quantitative and comparative disclosures	4

7. OUTLOOK		Total Score 11
What challenges and uncertainties are likely to be encountered by the entity when pursuing its strategy and what are the potential implications for its business model and future performance?		
Construct	**Scoring Element**	
7.1. Expected changes: the entity's anticipated changes of the operating context, risks and opportunities in the short, medium and long term. Changes could be critical challenges and uncertainties (usually found in the Chairman/CEO/CFO's review)	**0**=no mention **1**=undetailed narrative disclosure **2**=detailed narrative disclosures incorporating medium and long term future **3**=detailed narrative and quantitative disclosures incorporating medium and long term future	3
7.2. Potential implications: refer to how the anticipated changes will affect the entity and this includes a discussion of the availability, quality and affordability of capitals affected/ used by an entity (e.g., the continued availability of skilled labour or natural resources) including how key relationships are managed and why they are important to the entity's ability to create value over time.	**0**=no mention **1**=undetailed narrative disclosures **2**=detailed narrative disclosures **3**=detailed narrative and quantitative disclosures	3
7.3. Organisational readiness: this is a reflection of the entity's preparedness to deal with anticipated changes together with the potential implications	**0**=no mention **1**=undetailed disclosures **2**=detailed disclosures	2
7.4. Estimates: lead indicators for outlook. Examples include forecasts and projections, targets, sensitivity analyses, estimates of KPIs or objectives, KRIs, relevant information from recognised external sources, and significant assumptions	**0**=no mention **1**=forecasts, projections, targets, sensitivity analyses, estimates of KPIs and KRIs on financial indicators **2**=forecasts, projections, targets, sensitivity analyses, estimates of KPIs and KRIs on financial and non-financial indicators **3**=forecasts, projections, targets, sensitivity analyses, estimates of KPIs and KRIs on financial and non-financial indicators, and comparative disclosures	3

8. BASIS OF PREPARATION AND PRESENTATION		Total Score 19
How does the entity determine what elements to include in the integrated report and how such matters are evaluated or quantified?		
Construct	**Scoring Element**	
8.1. Materiality determination process: this entails identification of relevant matters depending on their potential and ability to affect value creation; evaluating the importance of all relevant matters based on their potential effect on value creation; presenting matters based on their relative importance; and determination of information that is deemed material	**0**=no mention **1**=identification of materially relevant matters **2**=narrative disclosures evaluating the importance of relevant matters **3**=narrative disclosures evaluating the importance of relevant matters, and prioritisation of important matters **4**=narrative and quantitative disclosures evaluating the importance of relevant matters, and prioritisation of important matters	4
8.2. Frameworks and methods used in the materiality determination process: summary of significant frameworks and methods used to enhance consistency and comparability	**0**=no mention of frameworks and methods **1**=undetailed narratives on frameworks and methods **2**=detailed narratives on frameworks and methods	2
8.3. Reporting boundary *(operational boundary not time frame of the report).* Material risks, opportunities and outcomes associated with entities/stakeholders included in the IARs	**0**=no reporting boundary **1**=narrative on reporting boundary **2**=detailed explanation on how reporting boundary was determined **3**=detailed explanation on the determination of reporting boundary, and mentioning of material risks, opportunities and outcomes associated entities/stakeholders presented in the IAR.	3
8.4. Conciseness and linkages: IAR follows a logical structure and includes cross-references; clarity of language and specificity of concepts	**0**=no conciseness **1**=logical structure, clarity of language and cross references **2**=balance between conciseness and completeness and comparability	2

8.5. Reliability: is enhanced by mechanisms like robust internal control, stakeholder engagement, internal audit functions, and independent external assurance	**0**=no assurance **1**=existence of an internal audit or similar function **2**=mandatory audit **3**=independent external assurance on non-financial reporting	3
8.6. Responsibility for an IAR: acknowledgement of responsibility to ensure integrity of the IAR and acknowledgement of application of collective minds in the preparation and presentation of the IAR. Conclusion on whether the IAR is prepared and presented according the <IR> framework	**0**=no statement of responsibility **1**=statement of responsibility ensuring integrity of the IAR and use of collective minds to produce the IAR **2**=statement of responsibility ensuring integrity of the IAR, use of collective minds to produce IAR, and a conclusion whether the IAR was produced according to the <IR> framework	2
8.7. Transformation	**0**=no mention **1**=undetailed narrative disclosures **2**=detailed narrative disclosures **3**=detailed narrative and quantitative disclosures	3

Appendix B: Invitation to participate in an academic research study: Delphi Inquiry

![UNISA university of south africa logo]

INVITATION TO PARTICIPATE IN AN ACADEMIC RESEARCH STUDY

15 January
2017

Dear
participant

You are invited to participate in a research study titled *"A stakeholder accountability index for integrated reporting by South African listed companies"*. This study is being conducted by Mr Chisinga Ngonidzashe Chikutuma, a doctoral student in financial accounting under the supervision of Professor HC Wingard of the College of Accounting Sciences at the University of South Africa (UNISA).

The purpose of this explanatory sequential mixed methods study is to extend the extant literature by developing a weighted polychotomous disclosure index/framework. In the first quantitative phase, polychotomous disclosure index data will be collected from the 1-Net BFA database in order to establish the extent to which Integrated Annual Reports (IARs) prepared by the JSE listed companies are aligned to the Integrated Reporting framework. The second qualitative phase will be conducted as a follow up to the quantitative results to help explain the quantitative results. In this exploratory follow-up, the plan is to explore the factors that contributed towards a change in Integrated Reporting quality by JSE listed companies over the period 2013 to 2016. Your participation in this study is voluntary and you are free to withdraw your participation at any time without obligation. The survey should take approximately 40 minutes to complete.

The Research Ethics Review Committee in the College of Accounting Sciences, at Unisa, has approved the interview. There are no risks associated with participating in this study. The information from all participants will be treated as confidential at all times and will not be made available to any entity or third party. Neither your name nor that of your organisation will be linked to any responses since the responses will be captured anonymously. The information obtained from the Delphi questionnaire will be used for academic research purposes only. Although you will not receive any compensation for participating, the information collected may benefit the accounting field by providing an accountability framework to measure and evaluate the quality of Integrated Annual Reports, and proffer factors that contributed towards a change in Integrated Reporting quality over the period, 2013 to 2016 by JSE listed companies. By completing this survey, you are indicating your consent to participate in the study. Your participation is appreciated. You have been selected to participate in this study because you are one of the leading experts who has contributed significantly in integrated reporting. The records relating to this study will be kept in password controlled hard drive and will be destroyed after five years as per university policy. The logging details to the Delphi Inquiry software will be send to your email once you have fully accepted the invitation.

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If you have any questions or concerns about the interview or about participating in this study, please contact Mr Chisinga Ngonidzashe Chikutuma on cell number 0635703511; E-mail-chikucn@unisa.ac.za or his supervisor Professor Christa Wingard E-mail-wingahc@unisa.ac.za.

Thank you for taking time to assist me in my educational endeavours. If you would like an electronic copy of the findings of this research, please contact me on the email address provided above.

Sincerely,
Chisinga Ngonidzashe Chikutuma
Signature:
Doctoral Candidate
Department of Financial Accounting, College of Accounting Sciences, UNISA

Professor HC Wingard
Signature:
Study Supervisor

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
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Appendix C: Invitation to participate in an academic study: Interview 1

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INVITATION TO PARTICIPATE IN AN ACADEMIC RESEARCH STUDY

15 January 2018

Dear Participant

You are invited to participate in a research study titled "*A stakeholder accountability index for integrated reporting by South African listed companies*". This study is being conducted by Mr Chisinga Ngonidzashe Chikutuma, a doctoral student in financial accounting under the supervision of Professor HC Wingard of the College of Accounting Sciences at the University of South Africa (UNISA).

The purpose of this explanatory sequential mixed methods study is to extend the extant literature by developing a weighted polychotomous disclosure index/framework. In the first quantitative phase, polychotomous disclosure index data will be collected from the I-Net BFA database in order to establish the extent to which Integrated Annual Reports (IARs) prepared by the JSE listed companies are aligned to the Integrated Reporting framework. The second qualitative phase will be conducted as a follow up to the quantitative results to help explain the quantitative results. In this exploratory follow-up, the plan is to explore the factors that contributed towards a change in Integrated Reporting quality by JSE listed companies over the period 2013 to 2016. Your participation in this study is voluntary and you are free to withdraw your participation at any time without obligation. You have been selected to participate in this study because your company has the highest Integrated Reporting Quality score for the year 2013. The records relating to this interview will be kept in a password controlled hard drive and will be destroyed after five years as per university policy. The interview should take approximately 30 minutes.
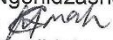
The Research Ethics Review Committee in the College of Accounting Sciences, at Unisa, has approved the interview. There are no risks associated with participating in this study. The information you provide, will be treated as confidential at all times and will not be made available to any entity or third party. Neither your name nor that of your organisation will be linked to any responses since the responses will be captured anonymously. The information obtained from the interview will be used for academic research purposes only. Although you will not receive any compensation for participating, the information collected may benefit the accounting field by providing an accountability framework to measure and evaluate the quality of Integrated Annual Reports, and proffer factors that contributed towards a change in Integrated Reporting quality over the period, 2013 to 2016 by JSE listed companies. By participating in this interview, you are indicating your consent to participate in the study. Your participation is appreciated.

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If you have any questions or concerns about the interview or about participating in this study, please contact Mr Chisinga Ngonidzashe Chikutuma on cell number 0635703511; E-mail-chikucn@unisa.ac.za or his supervisor Professor Christa Wingard E-mail-wingahc@unisa.ac.za.

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Chisinga Ngonidzashe Chikutuma
Signature:
Doctoral Candidate
Department of Financial Accounting, College of Accounting Sciences, UNISA

Professor HC Wingard
Signature:
Study Supervisor

University of South Africa
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Appendix D: Invitation to participate in an academic study: Interview 2

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INVITATION TO PARTICIPATE IN AN ACADEMIC RESEARCH STUDY

15 January 2018

Dear Participant

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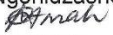
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If you have any questions or concerns about the interview or about participating in this study, please contact Mr Chisinga Ngonidzashe Chikutuma on cell number 0635703511; E-mail-chikucn@unisa.ac.za or his supervisor Professor Christa Wingard E-mail-wingahc@unisa.ac.za.

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Sincerely,
Chisinga Ngonidzashe Chikutuma
Signature:
Doctoral Candidate
Department of Financial Accounting, College of Accounting Sciences, UNISA

Professor HC Wingard
Signature:
Study Supervisor

Appendix E: Invitation to participate in an academic research study: Interview 3

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INVITATION TO PARTICIPATE IN AN ACADEMIC RESEARCH STUDY

15 January 2018

Dear Participant

You are invited to participate in a research study titled "*A stakeholder accountability index for integrated reporting by South African listed companies*". This study is being conducted by Mr Chisinga Ngonidzashe Chikutuma, a doctoral student in financial accounting under the supervision of Professor HC Wingard of the College of Accounting Sciences at the University of South Africa (UNISA).

The purpose of this explanatory sequential mixed methods study is to extend the extant literature by developing a weighted polychotomous disclosure index/framework. In the first quantitative phase, polychotomous disclosure index data will be collected from the I-Net BFA database in order to establish the extent to which Integrated Annual Reports (IARs) prepared by the JSE listed companies are aligned to the Integrated Reporting framework. The second qualitative phase will be conducted as a follow up to the quantitative results to help explain the quantitative results. In this exploratory follow-up, the plan is to explore the factors that contributed towards a change in Integrated Reporting quality by JSE listed companies over the period 2013 to 2016. Your participation in this study is voluntary and you are free to withdraw your participation at any time without obligation. You have been selected to participate in this study because your company has the highest Integrated Reporting Quality score for the year 2015. The records relating to this interview will be kept in a password controlled hard drive and will be destroyed after five years as per university policy. The interview should take approximately 30 minutes.

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Thank you for taking time to assist me in my educational endeavours. If you would like an electronic copy of the findings of this research, please contact me on the email address provided above.

Sincerely,
Chisinga Ngonidzashe Chikutuma
Signature: *Afnah*
Doctoral Candidate
Department of Financial Accounting, College of Accounting Sciences, UNISA

Professor HC Wingard
Signature:
Study Supervisor

Appendix F: Invitation to participate in an academic research study: Interview 4

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INVITATION TO PARTICIPATE IN AN ACADEMIC RESEARCH STUDY

15 January 2018

Dear Participant

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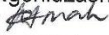
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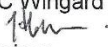
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Sincerely,
Chisinga Ngonidzashe Chikutuma
Signature:
Doctoral Candidate
Department of Financial Accounting, College of Accounting Sciences, UNISA

Professor HC Wingard
Signature:
Study Supervisor

Appendix G: Consent to participate in this study

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CONSENT TO PARTICIPATE IN THIS STUDY

I, _____, confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read and understood the study as explained in the information sheet.

I was accorded an opportunity to ask questions and I am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty.

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the semi-structured interview.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname…………………………………………… …………..(please print)

Participant Signature…………………………………………..Date…………………

Researcher's Name & Surname: Chisinga Ngonidzashe Chikutuma

Researcher's signature: …………………………..Date: 15 January 2018.

Appendix H: Ethics approval (UNISA College of Accounting Sciences Ethics Review Committee)

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UNISA COLLEGE OF ACCOUNTING SCIENCES ETHICS REVIEW COMMITTEE

Date 2017-10-17

Dear Mr CN Chikutuma

Decision: Ethics Approval from 2017-10-17 to 2022-10-16

ERC Reference: 2017_CAS_052

Name: Mr CN Chikutuma
Student/ Staff #:45961735

Researcher: Mr CN Chikutuma
chikucn@unisa.ac.za

Working title of research:

A Stakeholder Accountability Index for Integrated Reporting by South African Companies

Qualification: Postgraduate research

Thank you for the application for research ethics clearance by the Unisa College of Accounting Sciences Research Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period indicated above.

The application was reviewed by the College of Accounting Sciences Research Ethics Review Committee on 17 October 2017 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment, and approved.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the College of Accounting Sciences Research Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of

participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.

6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.

7. No field work activities may continue after the expiry date of this certificate.
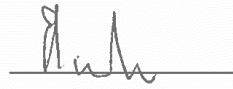
Note:

The reference number of this certificate should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Yours sincerely,

Ms L Grebe
Chair of CAS RERC
E-mail: grebel@unisa.ac.za
Tel: 012 429 4994

Prof E Sadler
Executive Dean CAS

URERC 25.04.17 - Decision template (V2) - Approve

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