Cape Peninsula
University of Technology

Risk management practices, disclosures and risk governance maturity of South African universities: An annual report disclosures analysis

By

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Thesis/Dissertation submitted in fulfilment of the requirements for the degree

Masters in Internal Auditing

in the Faculty of Business and Management Sciences

at the Cape Peninsula University of Technology

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Cape Town

August 2020

DECLARATION

I, INGA SITYATA, declare that the contents of this dissertation/thesis represent my unaided work and that the dissertation/thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

Signed **Date**

ABSTRACT

In recent years South African universities have been confronted by a series of events such as #Feesmustfall protests, demand for the decolonisation of education and free higher education which in many instances resulted in vandalism and disruption of recent academic years. These challenges resulted in increased scrutiny from stakeholders such as government, external funders, and the public, driven by the need for detailed disclosures on how these important societal establishments are managed by those entrusted with such responsibility and utilises the public funds to continue creating value, remain viable and responsible organisations. Due to the uncertainty presented by these emerging and strategic threatening events in a global and rapidly changing educational sector, South African universities had to find mechanisms to manage the uncertainty and provide stakeholders with detailed disclosures to promote transparency and accountability as per the Higher education Act and King IV.

This study aimed to assess the extent to which South African universities have adopted, applied and explained King IV's recommended practices for effective risk management and the corresponding risk governance maturity of institutional practices. This study was motivated by the #Feesmustfall event as experienced in 2015, which pointed to the lack of effective risk management practices and volatility preparedness at South African universities. The introduction of King IV in 2016 with the "Apply and Explain" philosophy, which possibly led to the improvement of the lack of detailed disclosure on the actual risk management practices applied as highlighted by prior studies since previous King codes were underpinned by the "Comply or Explain" and "Apply or Explain" philosophy. The study is further motivated by the lack of risk management literature in the South African educational sector as most studies explore the corporate sector.

The study was conducted into two phases; with phase one conducting a literature review and the second phase developed a risk disclosure Checklist using King IV recommended practices and risk governance maturity framework, which was used to assess the annual reports of the sampled universities. A qualitative content analysis was conducted and analysed using exploratory research designs within constructive paradigms and employed deductive reasoning.

The results of the study revealed that South African universities have the correct risk management structures in place and have “Applied and Explained” their risk management practices. However, challenges were identified in areas such as defining and approval of risk appetites and risk tolerance, development, and implementation of business continuity plans confirming the lack of preparedness for disruptions, annual revision, and approval of policies which should promote an ethical environment and lastly integrating risk management into the culture and business activities of the universities. The results also revealed that South African universities are mature regarding risk governance as they are at an Integrated level 3 and improving. This is attributed to some universities already applied the minimum risk governance requirements in higher levels of maturity such as Predictive Level 4 and Advanced level 5. Nevertheless, there were challenges such as embedding risk management into decision-making, capital allocation, strategic objective and conducting risk management training for awareness and promoting a culture that embraces risk management.

This study contributes to the gap in the literature by generating new insights on risk management practices and disclosures at universities in South Africa. These insights are of significance to risk practitioners, risk managers, university policymakers and other academics due to the implications highlighted. The study further provides recommendations on the risk disclosure gaps identified and the potential future studies due to the limitations outlined.

ACKNOWLEDGEMENT

I am profoundly grateful to:

- God almighty for giving me strength and wisdom
- My mother for her prayers
- My supervisors, Prof Job Dubihlela and Ms. Lise Botha, for guiding me through the journey. The doors to their offices were always open when I had any questions about this research
- The management of the Department of Internal Auditing and Financial Information Systems, under the leadership of my ever-helpful supervisor, for creating a wonderful higher learning environment
- My friends and fellow postgraduate students, Keutloile Praise Moyo, Olwethu Ntshonga, and Siphenathi Mapikana for being there from the first year.
- My mentor and manager at work Bea Ndlovu, for exposure in areas that contributes to my studies.

DEDICATION

I dedicate this study to my mother for her prayer and raising me as a single mother and valued the importance of education. Secondly, I dedicate this study to my daughter Zazi for making me a better man and inspire her.

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GLOSSARY

Abbreviation	Explanation
CEM	Council Of Education Ministers
CHE	Council on Higher Education
CRO	Chief Risk Officer
FEI	Financial Executive Institute
HEDCOM	Heads of Education Departments Committee
HEIs	Higher Education Institutions
IASB	International Accounting Standards Board
IIA	Institute of Internal Auditors
IOD	Institute of Directors
JSE	Johannesburg Security Exchange
NACUBO	National Association of College and University Business Officers
RADM	Risk in decision-making
RIMS	Risk and Insurance Management Society
RSA	Republic of South Africa
SRC	Student Representative Council
URMIA	University Risk Management & Insurance Association
VC	Vice-Chancellor
ERM	Enterprise Risk Management
COSO	Committee of Sponsoring Organisations of the Treadway Commission
ISO	International Organisation for Standardization

CHAPTER ONE (1)
BACKGROUND AND RESEARCH PROBLEM

1.1 BACKGROUND TO THE RESEARCH PROBLEM

It was South Africa's first black president Nelson Mandela, who expressed that "Education is the most powerful weapon which one can use to change the world" (Assar, El Amrani & Watson, 2010). A statement he strongly believed in as the newly elected democratic government embarked on a journey to transform the South African education system. Such an ambitious task was not easy given the inherent challenges of the past. Nonetheless, it was a transformational path needed for the greater good and future of the country given the economic state at the time (Mncube, 2013). Over the years, HEIs have become an important social institution that plays a vital role in the prosperity of the country (Nongxa, 2010). According to Allais (2012), such prosperity is attained by producing a competent workforce that contributes to the economic activities of the country.

Therefore, it is in the best interest of the government, the private sector or external funders, the public and regulators for these institutions to strive and continue adding value to the economy and producing future leaders. However, with challenges such as the high cost of education, increased competition due to globalisation, internationalisation of education, availability of e-learning and the increasing demand for free higher education, the future of HEIs with their existing business model and strategic positioning is questionable and uncertain (Botha, 2019). These views are aligned with Rajab and Handley (2009) as outlined, HEIs operate in a complex and rapidly changing environment due to the introduction of new technologies, globalisation and internal issues such as ambiguous goals and ineffective leadership.

Nevertheless, various authors consent that the challenges faced by South African universities stem and/or are inherited from their past. It is argued that language as a medium of instruction, played a major role in the formation of South African universities. Historically, universities were divided into English and Afrikaans and later influenced by the apartheid system which created segregation between the main education system and the Bantu education created for Blacks (Moloi, 2015; Moloi, 2016; Nongxa, 2010; Mncube,2013).

The new democratic South Africa, in 1994, marked an important chapter in the history of the South African education sector, attributed to the restructuring of the sector by abolishing the apartheid education system policies and social organisations. New policies were developed to make education accessible to all, irrespective of race. Furthermore, government education expenditures were increased and the private sector through sponsorships and partnerships started investing in the education sector (Assar, El Amrani & Watson, 2010; Nongxa, 2010; Allais, 2012; Moloi, 2014). Consequently, as more stakeholders got involved, scrutiny increased, demand for adequate operational information and regulations were tightened as these institutions were now operating in a global landscape, attracting talent and students from all over the world. Thus, new risks emerged (Moloi, 2014).

Although the higher education sector embarked on a transformation journey, in recent years, there has been a shift in government funding enforcing universities to seek alternative funding from the private sector and international partners. According to Moloi (2015), the shift in the higher education funding resulted in fee increases to preserve the bottom line. The high cost of education and increased fees resulted in disruptions such as #Feesmustfall protests and demand for free higher education. These protests were accompanied by vandalism resulting in damages to property, financial loss and academic disruptions. More importantly, the possibility of implementing free higher education has the potential to utterly change the HEIs' business model and strategic objectives, if they were to survive and be viable institutions (Moloi, 2016; Mapheta, 2016).

Consequently, when these events are ineffectively managed, they can lead to South African universities not able to achieve their strategic and operational objectives and threaten their survival (Rustambekov, 2010). Hence, risk management in the higher education sector has gained substantial attention as HEIs are under pressure from stakeholders such as the government agencies, private sector, and regulators to develop risk management strategies to manage the emerging operational difficulties.

Prior studies revealed that risk management is mostly explored in the private sector, as these organisations have been exposed to corporate scandals and the global financial crisis. Furthermore, the current risk management frameworks originate and were developed for/and by the private sector. Yet, there are fundamental differences in the operational environment, organisational settings and strategic objectives in these types of organisations when compared to the higher education sector. Various authors further outlined that private companies when

compared with HEIs, have clear objectives, sufficient resources and effective leaders with effective decision-making structures for implementation of business objectives. Thus, risk management content and empirical studies are limited in the higher education sector, especially implementation as the best practices and implementation studies mostly explore the private sector. Moreover, numerous studies confirmed the notion that risk management practices are relatively new in the higher education sector with limited empirical research (Ramirez & Christensen, 2013; Grobler & Hornes, 2017; Andersen, 2010; Moloi, 2014; Moloi, 2016).

The slow adoption of risk management by HEIs is largely ascribed to these institutions being known as a place of forming ideas and being resistant to change (Power, 2007; Kezar & Meyer, 2007). Ramirez and Christensen (2013) concluded that adopting risk management practices developed for profit-making organisations can be challenging to implement as the principles are vaguely translated due to limited risk management content in the educational sector. Thus, at times risk management practices are viewed with scepticism and their applicability is questionable due to lack of content and operational differences. Moreover, HEIs often adopt risk management practices that are underdeveloped for their complex organisational setting with multiple campuses, faculties, and hierarchical decision structures (Moloi, 2015).

In the South African context, listed companies are required by the JSE listing requirements and the Companies Act of 2008 to adopt the King Code on Corporate Governance, including risk governance for effective risk management practices (JSE, 2016; Moloi; 2014; Moloi; 2016). The King Code requires organisations to make disclosures on the corporate governance practices applied, which can either be voluntary or mandatory as per the regulatory requirements (IoD; 2016). HEIs are not immune to the risks stemming from the external and internal operational environment as highlighted with the recent challenges. These challenges resulted in increased scrutiny by stakeholders and increased reporting requirements of their strategy to manage risks threatening their strategic and operational objectives. HEIs are required by the Department of Education as per the Higher Education Act No 101 of 1997, the Reporting Guidelines and Implementation Manual to apply the King Code recommended practices and disclose to stakeholders their risk management activities for transparency and assure stakeholders of their sustainability amongst other things (Moloi, 2016; IoD, 2016; JSE, 2016; RSA, 1997).

1.2 STATEMENT OF RESEARCH PROBLEM

HEIs operate in a complex and rapidly changing environment that consists of societal, political, economic, and the pressure to transform their business practices due to recent challenges with the potential to entirely shift their business model and strategic objectives. Consequently, events_such as #Feesmustfall and calls for free education lead to significant scrutiny from stakeholders and demand for transparency through disclosures of sufficient and adequate information for stakeholders to make an informed decision on the sustainability of these institutions (Moloi, 2015; Murtaja & Al-Wattar, 2016). Concurrently, South African universities are required by the Higher Education Act No 101 of 1997 to adopt risk management practices to govern risk as per the reporting guidelines and implementation manuals.

Prior studies on risk management practice disclosures in the South African context highlighted a lack of detailed disclosures on the actual risk management practices applied to govern risk. The lack of detailed disclosure is due to the previous King Codes which were underpinned by the "Comply or Explain" concept and King III with "Apply or Explain". Previous studies assessed the extent of disclosures using the rule-based codes or King III's "Apply or explain" concept. Hence, the lack of detailed disclosures as compliance and actual risk management practice disclosures were not required as long as the reason behind the non-application is provided to stakeholders (Moloi, 2014; Wilkinson, 2014; IoD, 2002; IoD, 2009; IoD, 2016).

The well-anticipated King IV was issued in 2016 the same period HEIs were confronted with the protests and disruptions (Moloi, 2016; IoD, 2016). The newly revised King code consists of outcome-based rules for good governance. The "Apply and Explain" philosophy was introduced as organisations are now required to apply the recommended practices and explain the application thereof, through annual report disclosure statements. However, although King IV principles do not have legislative power, HEIs are required by the Department of Education to disclose the actual practices applied to govern risk as per reporting guidelines (IoD, 2016).

The question that arises is: ***To what extent have South African universities applied and disclosed their risk management practices as per the King IV Code on Corporate Governance and the Higher Education Act No 101 of 1997and how mature is their risk governance?***

1.2.1 Rationale for the study- #FEESMUSTFALL

In 2015, a historical event commonly known as #Feesmustfall caused chaos in the higher education sector as universities were disrupted by student protests. This event resulted in financial losses and prolonged disruptions of academic activities (Mapheta, 2016; Moloi; 2016). These disruptions were followed by a series of events such as calls for free higher education which significantly changed the risk universe, exposure, and profile of HEIs due to the emerging risks and rapidly changing operational environment. Thus, according to Moloi (2016), these challenges enforced universities to reconsider their strategic objectives and formulate strategic risk responses to address these risks. For instance, if free higher education can become a reality it will enforce universities to revisit their strategy to ensure financial sustainability.

Consequently, South African universities are under scrutiny from stakeholders and required by the Higher Education Act to provide information on their business activities and processes including risk management practices for transparency and accountability of those entrusted with the responsibilities to effectively manage these societal institutions. Such information is disclosed using annual reports which incorporate information on activities taking place within the organisation. Risk disclosures have gained significant importance over recent years due to increasing organisational complexities and changing environments which have created uncertainties for future sustainability and stakeholder's demand for corporate information (Barac & Moloi, 2011; Mapheta, 2016).

Prior studies revealed that risk management and risk disclosures are widely explored in extant literature with a focus on the business sector or the educational sector outside of South Africa. Furthermore, South African studies conducted on risk management disclosure and risk governance in the education sector were carried out before the introduction of King IV in 2016 and based on previous King Codes. Hence multiple researchers highlighted a lack of detailed disclosures on the actual risk management practices applied to govern risk. The highlighted lack of detailed disclosure is due to the previous King Codes which were underpinned by the "Comply or Explain" requirement, as compliance and actual risk management practice

disclosures were not required as long as the reason behind the non-application is provided to stakeholders (Moloi, 2014, Wilkinson, 2014; Barac & Moloi, 2011).

Therefore, the study is motivated by the #Feesmustfall disruptions as trigger events and the gap in the literature as discussed above.

1.3 RESEARCH OBJECTIVES AND RESEARCH QUESTIONS

1.3.1 Main objective

The main objective of the study is **"***to explore the extent to which South African universities applied and disclosed their risk management practices and assess their risk governance maturity as disclosed in the annual reports***"** as annual reports are deemed the official communication tool between management and external stakeholders.

1.3.2 Specific objectives

The following specific objectives were developed:

- Identify risk management practices disclosure statements as recommended by King IV for effective risk management.
- Explore the extent to which South African universities have applied and disclosed their risk management practices as per the risk disclosure statements in the annual reports
- Determine the minimum risk governance requirements that could be incorporated as a proxy for risk governance by South African universities
- Determine risk management practices incorporated by South African universities to govern risks and assess risk governance maturity.

1.3.3 Research questions

The main research question of the study is:

To what extent have South African universities applied and disclosed risk management practices as per the King IV on corporate governance, the Higher Education Act and how mature is their risk governance?

The specific questions that arise during the literature review and remained unanswered:

- What are the risk management practices that could be adopted and applied by South African universities as recommended by King IV for effective risk management?

- To what extent have South African universities applied, explained and disclosed King IV's risk management recommended practices?
- What are the minimum risk governance statements requirements that could be incorporated as a proxy for risk governance by South African universities?
- How risks are governed by South African universities and risk governance maturity thereof?

Table 1 below presents a summary of the identified research questions, the methods used and the specific objectives addressed.

Table 1: Summary of research questions, methods and specific objectives

Research Question	Research methods	Specific objectives
What are the risk management practices that could be adopted and applied by South African universities as recommended by King IV for effective risk management?	King codes, Higher Education Act (reporting guidelines, implantation manuals), and relevant literature review we conducted.	Identify risk management practices disclosure statements as recommended by King IV for effective risk management.
To what extent have South African universities applied, explain, and disclosed King IV's risk management recommended practices?	Risk disclosure Checklist developed using King IV's recommended practices for risk governance. The checklist was used as a data extraction tool.	Explore the extent to which South African universities have applied and disclosed their risk management practices as per the annual reports' risk disclosure statements
What are the minimum risk governance statements that could be incorporated as a proxy for risk governance by South African universities?	A review of the literature on King IV, governance maturity framework, and risk governance frameworks.	Determine the minimum risk governance requirements that could be incorporated as a proxy for risk governance by South African universities
How risks are governed by South African universities and risk governance maturity thereof?	A Checklist with the minimum risk governance requirements was developed to assess the annual reports.	Determine risk management practices incorporated by South African universities to

		govern risks and assess risk governance maturity.

1.4 RESEARCH METHODOLOGY

1.4.1 Research designs and paradigms

The aims of an empirical study can be investigated in the form of qualitative, quantitative and mixed methods (Creswell, 2014). To address the main intent of the study, a qualitative approach was adopted for various reasons. The study concludes on the extent of disclosure and risk governance maturity using annual reports which are qualitative in nature. Secondly, major studies on risk disclosures in the South African dispensary highlighted a lack of detailed qualitative disclosures on the actual risk management practices applied to govern risk and King IV promotes qualitative disclosure.

Thus, the study aims to comprehend the actual risk management practices and assess if the annual report carried: (1) Full-Disclosure, (2) Non-Disclosure, or (3) Obscurely -Disclosure.

To achieve the aims of the study, an exploratory research design was employed as it allowed the researcher to explore the phenomenon of risk management in the higher education sector using secondary data to understand the research problem and gain insights. Lastly, to ascertain the extent to which South African universities have applied and disclosed their risk management practices, a constructivist paradigm was adopted as it is based on the notion of personal construction of meaning as the truth and reality are inevitably intertwined with social context (Lauckner, Paterson & Krupa, 2012). Consequently, the study gained an understanding of risk management and disclosure requirements before a risk disclosure checklist was developed to qualitatively assess the annual reports. Furthermore, constructive paradigms advocate the utilisation of a qualitative approach to seeking meaning and understanding of a phenomenon.

1.4.2 Population, sampling and sampling method

The research population consists of all public HEIs operating in South Africa that has issued an annual report for the period under review. A purposive sampling approach was used to draw a sample size of 18 annual reports. Purposive sampling allowed the researcher to be subjective/selective in defining the participants based on the needs of the study and the characteristics of the participants. Thus, this sampling technique ensured all the South African

university categories are equally represented. Moreover, this sample size was supported and deemed sufficient due to the research methodologies employed, the nature of prior studies conducted using this method and the sampling approach (Moloi, 2015).

1.4.3 Data collection and analysis

Data was collected using the risk disclosure Checklist which was developed guided by the King IV and governance maturity frameworks to formulate risk management practices and the minimum risk governance requirements. The study used secondary data extracted from South African universities' annual reports as deemed official documents to communicate with external stakeholders. To accomplish this, a qualitative content analysis was deployed by assessing the annual report's risk disclosure statements of the sampled universities. This approach was deemed relevant as it allowed the researcher to comprehend the disclosure statements as previous studies highlighted a lack of detailed disclosures on the actual risk management practices applied by South Africa organisations (Moloi, 2014; Wilkinson, 2014). Once the data was gathered, it was appropriately analysed and discussed in Chapter 4 while considering appropriate ethical considerations throughout.

1.5 SIGNIFICANCE AND RELEVANCE OF THE STUDY

The discipline of risk management has recently received increased attention from stakeholders such as regulators, the government, the private sector and the public (Guimond *et al*., 2010; Aven, 2016; Moloi, 2016). The increased attention to risk management over the years has spread to HEIs as they are not immune to the emerging risks emanating from recent challenges and complex operational environments.

Hence the study aims to accomplish the following:

- Contribute to the identified gap on risk management and governance empirical studies in the South African context and the higher education sector specifically.
- Assist HEIs and risk practitioners to improve their risk management disclosures. As the Checklist can be used in practice as criteria to assess the adequacy and completeness of risk disclosures that enable stakeholders to make informed decisions.
- The output will enlighten HEIs and practitioners on risk management requirements and disclosure perimeters within the higher education sector. Therefore, the findings should enable benchmarking of risk practices to identify areas for improvement.
- The findings are of significance to academics who may replicate this exploratory study in other sectors, areas and even among larger companies to confirm the validity of the

findings. Other researchers can also adopt the research methodology and the Checklist applied.

- The study provides an interesting view on the impact of social events and protests on risk management practices employed and further supports the notion of how legislative accounting practices echo stakeholder, societal expectations and potential to transform organisational practices.
- Lastly, provides unique insights into the application and disclosure of risk management practices in the education sector and submits an understanding of the risk governance maturity in the South African context. That is unparalleled as it is using King IV, in the South African context and the education sector to be specific. Unlike prior studies that were either from other countries, the public or private sector or uses King III.

1.6 LIMITATIONS OF THE STUDY

Although a detailed process was followed in designing the research methodology and performing the study to ensure adequate coverage and reduce potential limitations, however, the following limitations have been identified:

Firstly, the study employed content analysis using annual reports as published by the South African universities. Therefore, risk disclosure statements in the annual report might not reflect the actual risk management practices applied as some information might not be disclosed due to their sensitivity and being of a strategic nature.

Secondly, content analysis as a research method relies on the quality of the annual report; hence, risk management disclosure might be incomplete and overlook significant information resulting in the researcher not able to conclude on the extent of disclosure or maturity for the specific practices omitted.

Thirdly, the study uses King IV as a corporate governance framework that recommends the best practices for effective risk management. Although, King IV improved on King III's "Apply or Explain" philosophy to proceed beyond a compliance "tick box" mindset to "Apply and Explain" philosophy which is an outcome-based best practice. Still, King IV does not have the legislative powers to enforce adoption and disclosures, as it relies on regulatory bodies to enforce the recommended practices.

Fourthly, the study is delineated to South African universities and industry-specific. Therefore, its findings may not be generalisable to other sectors, privately funded HEIs, and other countries due to differences in legislation, strategic objectives and operating environment. Therefore, the findings may require further studies to be conclusive.

Lastly, the time-frame or "constraints" of the study, the use of qualitative content analysis which is known as labour or time-consuming resulting in data coding errors or personal biases and the use of non-probability, purposive sampling approach which can result to the sample size becoming unrepresentative of the population…. However, to address this, the researcher used data triangulation methods for consistency and comparison and ensured all South Africa university categories are represented evenly.

Chapter 2 discussed the mitigation to the identified limitations and these limitations do not outweigh the contribution to be made by this study in terms of literature, findings implications, recommendations and further areas of study.

1.7 THE STUDY LAYOUT

The study follows an orderly process whereby each chapter builds into the previous one. Below is the layout of the presented in five chapters:

Chapter 1: Introduction and problem identification:

This chapter provides a research background and introduces the research problem, research questions and the aims of the study.

Chapter 2: Literature review:

This chapter revisits prior studies on risk management, risk governance maturity, and identified gaps in the relevant literature as well as research questions raised and remained unanswered.

Chapter 3: Research methodology:

This chapter presents the research design and methodology employed as well as sampling techniques, data collection and analysis process followed to address the objectives of the study

Chapter 4: Data Presentation and discussion of the results:

This chapter gives an analysis of the data extracted from the annual reports and discussed the results

Chapter 5: Summary, conclusions and recommendations:

This chapter provides a summary and conclusions of the study as well as implications, recommendations, limitations and suggestions for future studies

CHAPTER TWO (2)
LITERATURE REVIEW

2.1 INTRODUCTION

This chapter aims to review prior studies on risk management practices, risk disclosures and risk governance minimum requirements by HEIs in South Africa, particularly contextualising it to universities. By so doing, the chapter identifies the gap in the literature regarding risk management practices and risk governance maturity in the South African higher education context.

The literature review is set out in subsections as follows:

2.1 Introduction
2.2 Background on Higher Education Institutions
2.3 The #Feesmustfall as the trigger event
2.4 Risk concept
2.5 Risk management
2.6 Risk management approaches
2.7 Risk governance
2.8 Risk governance maturity
2.9 Risk management in a university environment
2.10 Risk disclosures
2.11 Gaps in prior studies and research questions that arise.
2.12 Summary and conclusions

2.2 BACKGROUND ON HIGHER EDUCATION INSTITUTIONS (HEIS)

2.2.1 Higher education

It was South Africa's first black president Nelson Mandela, who said that "Education is the most powerful weapon which one can use to change the world" (Assar, El Amrani & Watson, 2010). Prior studies suggest that HEIs play a vital role in the economic growth and prosperity of the country. According to Allais (2012), such prosperity and economic development are achieved by producing a competent workforce that contributes to the economic activities and prosperity of the country. Over the years HEIs have become an important societal institution. Hence, it is in the best interest of the government, private sector, and the public for these

institutions to strive and add value to the economy and producing future leaders (Nongxa, 2010; Reygan, 2016; Allais, 2012; Mncube, 2013).

Anastassios and Roula (2014) outlined that HEIs contribute to the prosperity of the country by the production of competent human capital and developing both primary and secondary knowledge. Furthermore, HEIs contribute to; (1) economic prosperity by creating employment (directly and indirectly) and contributing to social cohesion and non-economic activities such as health benefits. And, (2) HEIs have always been known as the domain of knowledge and ideas, with some researchers highlighting that over the years their role has transformed due to mass education (KPMG, 2009; Pouris, 2012; USAF, 2015)

Based on the above, HEIs have an important part to play in society. These views are in line with Sampson (2010) who asserted that the first HEIs in Africa, just like any level of education phase was established by the churches. Thus, for decades HEIs have been part of the society and it is in the best interest of the government, the private sector, regulatory bodies and the public at large for these institutions to continue providing value and changing lives through education. Therefore, their survival and sustainability are the duty of all these stakeholders based on vested interest. Although, HEIs play a major part in the economy and prosperity of the country as discussed above. However, just like any other organisation they have been faced with various challenges stemming from either the current operational environment or inherently from the past.

Prior studies outlined that due to the apartheid era, the South African education system has been in several transformational phases. Language as a medium of instruction played a major in the formation of South African universities. Previously, universities were divided into English and Afrikaans and later influenced by the apartheid system and its policies, which created further segregation between the main education system and the Bantu education created for Blacks (Nongxa, 2010; Reygan, 2016; Anastassios & Roula, 2014).

The new democratic South Africa, in 1994, marked an imperative chapter in the history of the South African education sector, attributed to the restructuring of the sector by abolishing the apartheid education system policies and structures. Thus, new policies were developed to make education accessible to all regardless of race (Mncube, 2013). Furthermore, government spending on education was increased and the private sector through sponsorships and partnerships started investing in the education system (Nongxa, 2010). These sentiments are

further highlighted by Mncube (2013) who stated that the new education system embedded hopes into those that were previously excluded and a new dawn of a unified and integrated education system (Nongxa, 2010; Breidlid, 2009; Behr & Macmilla, 2004; Badat, 2004).

Arguably, HEIs over the years has undergone numerous and fundamental changes to the current state, with different stakeholders having vested interest in the success of these important societal institutions. As such, the increased education spending resulted in the education sector receiving significant attention from stakeholders such as government agencies, the public, students, private sector and international partners. Thus, HEIs are required to account for the funds and assure stakeholders that the institutions are effectively managed and sustainable to continue adding value to stakeholders and prosperity of the country (Kruss *et al.*, 2012; Nongxa, 2010; Allais, 2012;).

Nonetheless, in recent years' challenges such as the cost of education, increased competition due to globalisation, internationalisation of education due to e-learning gaining popularity and the increasing demand for free higher education. The future of HEIs, their current business model and strategic positioning is questionable and uncertain (Botha, 2019). These views are aligned with those of Rajab and Handley (2009) as outlined, HEIS operates in a complex and rapidly changing environment due to the introduction of new technologies, globalisation and internal issues such as ambiguous goals and ineffective decision structures pertaining from their past.

2.2.2 South African education system formation

Historically, South African universities were formed based on the UK and Scottish university models due to the UK's influence on the South African governance system (Hall *et al*., 2002). Over the decades, HEIs have been exposed to socio-cultural and political pressures. Consequently, these fundamentals played a significant and vital role in building a foundation for the current higher education landscape.

Thus, several authors highlighted the significant role played by ethnicity and language in the formation of the higher education sector, as HEIs were formed based on societal values and political influence of the past. According to Hall *et al* (2002), the primary contributing factor to the formation of the South African education system was the division between English and Afrikaans as the medium of instruction. Resulting in the split based on race and ethnic groups.

As, the 36 HEIs of the time was divided into sub-segments; (1) four English-medium universities, which were formed for White students. (2) six Afrikaans-medium universities, which accommodated Afrikaans speaking White students, (3) seven technikons also accommodating White students, (4) six universities and five technikons were formed in the "homelands" accommodating African students after the University Education Act was promulgated in 1959, (5) two urban universities and two technikons were created for Coloured and Indians. (6) Additionally, two "special purpose" and two distance learning universities were created (Hall et al., 2002; Mncube, 2013; USAF, 2016; O'Brien, 2010; Pouris, 2012; Sampson, 2010; Moloi, 2016)

Based on the information provided by the Universities of South Africa (USAF) (2016) which outlined a brief history of South African universities. The first university in South Africa was formed in 1873 known as the University of the Cape of Good Hope as a result of an amalgamation between two colleges known as the South African College in Cape Town formed 1829 and Victoria College in Stellenbosch formed in 1865. In 1959 an extension of the University Education Act was promulgated to provide entry for black people in the education system. This led to the establishment of universities in provinces such as Eastern Cape and Kwa-Zulu Natal, which were black-dominated at the time and known as "homelands" (Allais, 2012; Mncube, 2013; USAF; 2016).

As discussed, the establishment of the South African education system emanates from society and political influence such as language and race. Nonetheless, the formation of democratic South Africa in 1994 marked a significant chapter in the South African education system (Nongxa, 2010). According to Mncube (2013), this signified a long-awaited transformation as certain races were subjected to Bantu education which was considered inferior. Thus, a new Department of Education was formed with the aiming of developing an interrelated and united higher education system. The new South Africa embedded hopes in the education system for a better future for all. Over the years, HEIs became a significant societal establishment that required to be transformed as the country placed its future and hope for the talents and future leaders produced by these institutions. (Nongxa, 2010; Mncube, 2013; Behr & Macmillan, 2004; Anastassios & Roula , 2014; Kruss, *et al*, 2012).

According to the Council on Higher Education (CHE) (2009), democratic South Africa allowed HEIs to refine their societal role by promoting diversity and developing structures that support good corporate governance and responsible organisation (including effective risk governance

and quality assurance). For the democratic government to successfully implement the new education program, the apartheid structures and policies were dismantled. The Department of Education for the first five years of education restructuring focused on integrating the formerly divided bureaucracies. Accompanied by the establishment of a national department of education and nine provisional education departments.

Additionally, South African education technikons were merged to form the universities of technology, creating the current university categories known as traditional, comprehensive and universities of technology (CHE, 2009; USAF; 2016; Higher Education Act No 101, 1997).

Relating to policies, new education policies and frameworks were developed to govern HEIs and the new inclusive education system: (1) the South African Constitution of 1996 outlined that education should be transformed and be inclusive regardless of race, gender and disabilities. (2) the National Education Policy Act (NEPA) (1996) defined the policies and legislation regarding monitoring of responsibilities of the Minister of Education, the relationship between the different provisional structures and the formation of the Council of Education Ministers (CEM) and the Heads of Education Departments Committee (HEDCOM) to govern education. (3) the Higher Education Act (1997) was introduced, which references to the newly formed education system and formed a statutory Council of Higher Education (CHE), which advises the Minister of Education on quality assurance and reporting requirements.

From above, it can be deduced that the newly formed democratic government embarked on education transformation phases to make education accessible to all. Therefore, policies that govern the new education system were developed together with the governance structures. Moreover, the new Department of Education established education financing plans through an equity-driven financing model that determines the allocation of education funds and made them available to previously disadvantaged racial groups (Mncube, 2013).

The literature above highlighted that the challenges faced by HEIs are inherent to their past. Thus, one of the challenges confronted by the newly established Department of Education included the size and complexity of the provisional departments due to their inherent structures

(Mncube, 2013).

According to the South African Republic, Department of Education (Republic of South Africa (RSA) (DoE), (2018), the challenge faced by the newly formed Department of Education was integrating 19 racially and ethnically divided departments to blend and work towards a common goal with the newly appointed public servants. However, more challenges and developments will be discussed in detail once the concept of risk is introduced.

2.2.4 South African universities

South African universities are divided into three segments namely: traditional universities which offer theoretically degrees, universities of technology which are made up of the mergers between technikons and offer vocationally oriented curricular and lastly comprehensive universities that offer both elements (CHET, 2019).

Table 2: South African universities by categories

Traditional universities	Universities of technology	Comprehensive universities
University of Cape Town	Cape Peninsula University of Technology	University of Johannesburg
University of Fort Hare	Central University of Technology	Nelson Mandela University
University of Limpopo	Durban University of Technology	University of South Africa
University of KwaZulu-Natal	Mangosuthu University of Technology	University of Venda
North-West University	University of Mpumalanga	Walter Sisulu University
University of Pretoria	Sol Plaatje University	University of Zululand
Rhodes University	Tshwane University of Technology	University of Mpumalanga
Sefako Makgatho Health Sciences University	Vaal University of Technology	
University of Stellenbosch		
University of the Western Cape		
University of the Witwatersrand		

2.2.5 South African HEIs governance

Figure 1 below presents the first phase of transformation in the education sector as the Department of Education was formed to govern HEIs administered by the various structures formed as per the Higher Education Act. (SAF, 2007).

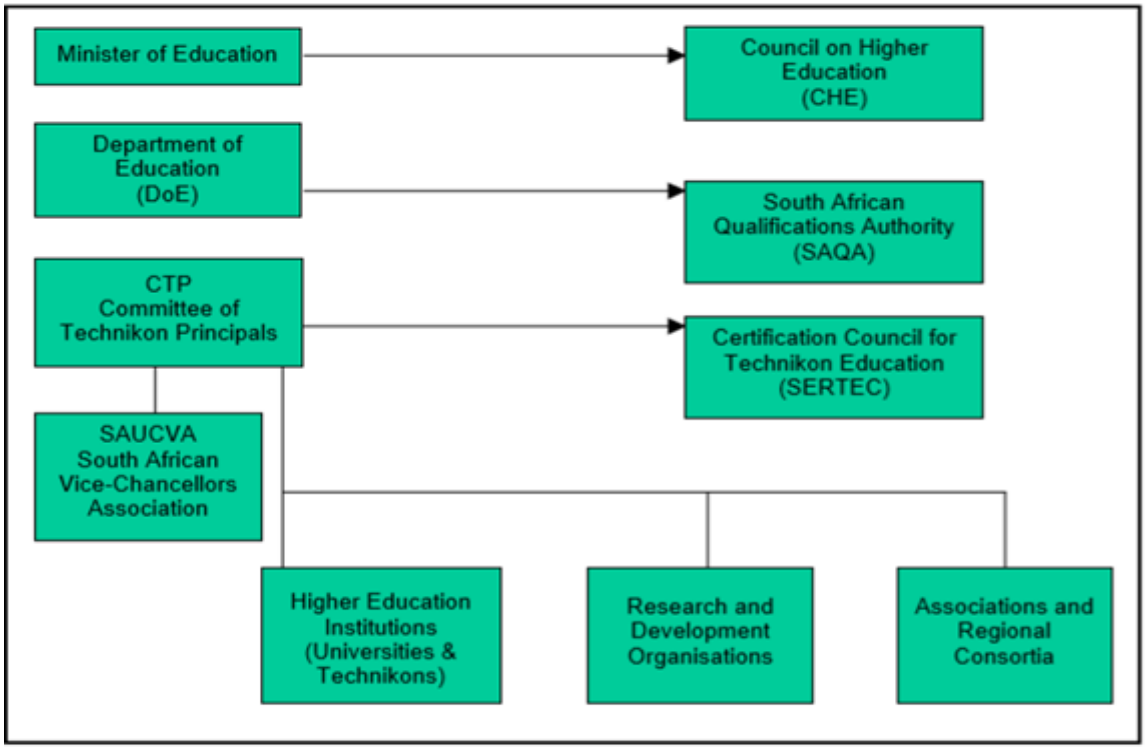


Figure 1 HEIs governing bodies' structure

Nonetheless, post-1994, the South African educational sector transformed its governance structures as the education system went through much desired fundamental reinvention and changes. These changes resulted in the mergers of technikons into universities of technology and the incorporation of new universities. Consequently, the three university categories known as traditional, comprehensive and university of technology were formed. The newly established education system embedded hopes for a new country, shifting from a history of division to an integrated and globalised move to neoliberal governance (Mncube et al, 2010; SAF, 2014).

South African HEIs governance is regulated by the Higher Education Act No 101 of 1997 and the Institutional Statute. The Acts constitute the main legal framework for South African universities and provide guidelines on the governance structures and reporting. The Institutional Statute is the specific HEI governance instruments applied to interpret the Higher Education Policy into governance practices within the specific institution.

South African universities are managed by councils, subjected to the Higher Education Act. According to Chapter 4 of the Higher Education Act No 101 (1997) to govern the public education institution, the HEIs should appoint a chancellor as its head and all public higher education should establish the following structures as a minimum (Higher Education Act) (No 101 of 1997):

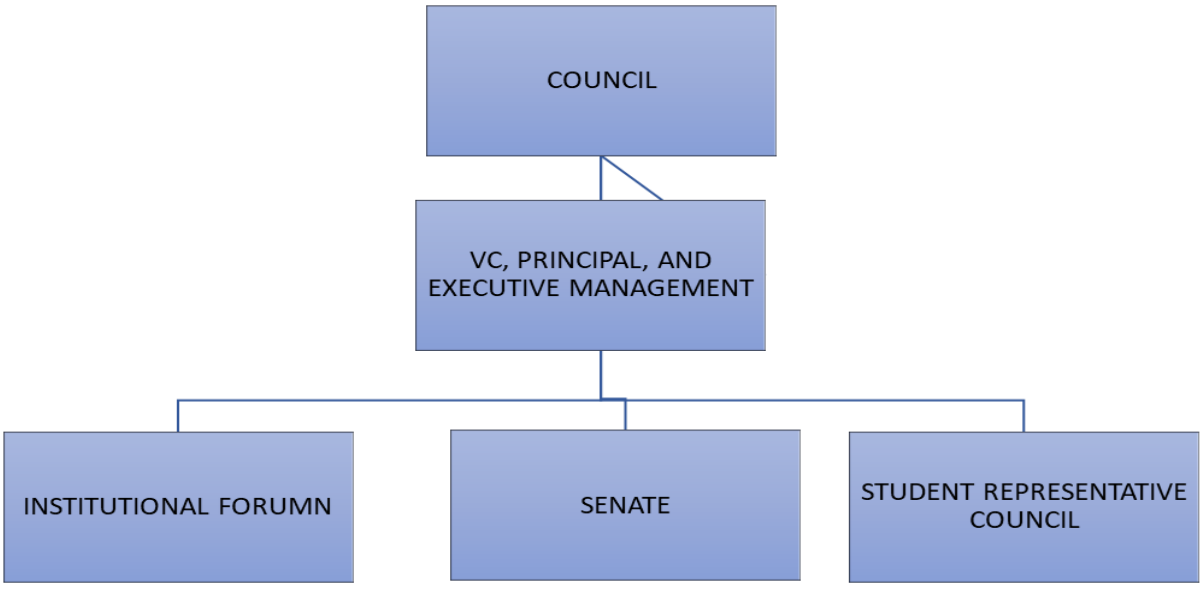


Figure 2: HEIs governance structure (Source: Author's construction)

Council- the institution's governing body and responsible for governing the institution as per the Higher Education Act No 101 of 1997. The council is accountable to the Minister of Education and should consist of not more than 30 members, comprising of executive officers, other employees of the institutions, students and external members.

Senate- accountable to the council for regulating all matters related to teaching, research, learning and academic functions of the institution as delegated by the council**.**

Vice-Chancellor (VC), Principal, Senior Executive Team- accountable to the council, and responsible for the administration and management of the HEI**.** To oversee the institution, executive committees are created.

Student Representative Council (SRC) - accountable to the student body/ community, VC, the principal, council and represents students' matters.

Institute (University) Forum- advise the council on matters affecting the institution.

As discussed above, South African education systems have faced multiple challenges which over the years have shaped the educational landscape. It was further outlined that these challenges can be traced back from the apartheid era after which the government embarked on a transformational mission to abolish the previous governance structure, established a framework policy for equity-based education financing. Lastly, laws and regulations were passed to regulate the newly established education system.

2.3 THE TRIGGER EVENT

According to Kevin (2010), South Africa is experiencing a crisis in education due to its past. Prior studies highlighted many challenges such as (1) mass education of the previously excluded races resulting in high demand for education and government spending on education, and (2) higher education costs (3) the effect of globalisation as HEIs are competing for talent (Botha, 2019), to mention a few. Other authors highlighted that, if these challenges are not addressed, they could threaten the stability and completely shift the strategic goals, business model and societal status of the HEIs (Kevin, 2010; Moloi, 2014; Moloi, 2016; Botha; 2019).

Unfortunately, these issues were not addressed as in the last semester of 2015, South African universities were confronted by a historical movement commonly referred to as #Feesmustfall. Due to its national and international social media popularity and solidarity. Most HEIs and universities to be specific suffered financial loss due to property vandalism and operational disturbances. Consequently, some universities were unable to conduct the year-end examinations, such as one university in the Western Cape which conducted the examinations at a military base in Goodwood due to student safety concerns (Mapheta, 2016).

The student movement commenced in mid-October 2015 at the University of the Witwatersrand, as the university announced a fee increase of 10.5% in the following year, although the inflation rate was at 6%. The University of Cape Town and Rhodes University joined the protests before other universities started taking part throughout the country (Mapheta, 2016; Moloi, 2016). The protests paused when the government announced that, there will be no fee increase in the following academic year (DoE 2016).

Notwithstanding, after negotiations between the Department of Education and HEIs, the then Minister of Education announced that fees will increase in 2017 and all universities were granted the freedom to decide on their percentage and capped at an 8% increase. This resulted in the protest resuming all over again (DoE, 2016; Mapheta, 2016). According to the

Department of Education (2016), it was calculated that the total cost of property damages amounted to R600 million.

However, the movement lost momentum in 2017 as the government increased higher education budgeted expenditure to R17-Million over a period of three years. To address the education crisis, the government further increased educational subsidies to universities by 10.9% a year to handle the fees increase (DoE, 2016). Free higher education to academically deserving students from poor backgrounds was also guaranteed (Mapheta, 2016; DoE, 2016).

These challenges resulted in emerging types of risk, rapidly changing and complex operational environments as they were accompanied by a series of protests such as demand for free higher education as promised. According to Moloi (2016), these emerging risks enforced universities to reconsider their strategic objectives and formulate strategic risk responses if they are to survive and maintain sustainability. For instance, if free higher education can become a reality it will enforce universities to revisit their strategy to assure financial sustainability and their survival (Moloi, 2016; Kevin 2010).

Thus, South African universities found themselves under scrutiny from stakeholders such as the public, the private sector, government offices and regulators concerning their strategies to address these emerging risks and the rapidly changing complex operational environment. It is evident from prior studies that South African universities have been under pressure lately from stakeholders, suffered financial loss due to the rapidly changing environment and emerging risks from internal and external factors. Consequently, South African universities find themselves confronted with emerging forms of risks such as students' demands for free higher education. These emerging risks have the potential to completely shift their business model and strategic goals. Hence, there increased requirements for South African universities to adopt and apply risk management practices that provide a mechanism to assess these potential disruptions and develop response strategies to ensure stakeholders of their sustainability and accountability as entrusted stakeholders (Moloi, 2016; DoE, 2016; Higher Education Act, 1997).

In essence, to address these challenges, the Department of Education through the Higher Education Act reporting guides and the Implementation Manual require HEIs to adopt risk management strategies to address the emerging risk and continue being of significant value to

the society that recognises the importance of education and its contributions to the future of the country. Therefore, the risk concept is discussed in the next section.

2.4 RISK DEFINED

As highlighted by several authors, all types of organisations are faced with risk. According to Skipper and Kwon (2007), the presence of risk is not new as it has plagued humans since the beginning of time. Before "risk" as a concept is defined, it is important to note that there is no universally accepted definition of risk as there are multiple acceptable definitions. However, according to Masama (2017), several authors define risk with a recognisable and similar theme. He provided a non-exhaustive list of risk definitions as not all definitions can be as there are multiple accepted definitions for risk.

Table 3:Risk definitions

Definition	Reference
Possibility that an undesirable event will occur, thereby negatively affecting the attainment of business objectives	Ramakrishna (2015:214)
An event that may adversely affect a business's ability to achieve its objectives and execute its strategies	McNeil et al. (2015:3)
The potential for [the] *realisation of unwanted, adverse consequences* [in a business environment]	Society for Risk Analysis (2013)
The possibility of economic or financial losses or gains, as a consequence of the uncertainty associated with a specific plan of action	Verbano & Venturini (2013:187)
The function of an event's likelihood and its consequences on the achievement of business objectives	Dumbravă & Iacob (2013:78)
The negative or positive effect of uncertainty on an organisation's objectives	International Organization for Standardization (2009)
Positive or negative effect of the consequence of an uncertain event or activity on something that humans value	International Risk Governance Council (2005)
Combination of the probability of an event occurring and the consequences of that event on the achievement of an organisation's objectives	Institute of Risk Management (2002)

Source: Masama, 2017.

Table 3 above provides a list of risk definitions. Seeking to understand risk definition themes, it is deduced that most risk definitions address the following risk elements: the likelihood of an event, uncertainty, the trigger or cause of the event and the impact on the organisation thereof (Baloyi & Price, 2003; Steinberg, 2004; Richie & Brindley, 2007).

These views are confirmed by Masama (2017) who also highlighted the uncertainty of an event and the impact of the uncertain event. Previous studies further asserted that uncertainty exists due to the decision maker's lack of knowledge of the imminent event and potential impact when realised. Additionally, the extent of apparent uncertainty is subjected to the accessibility of information to be used to assess the possible results and the ability to use the information on

the assessed events to address them. Thus, in situations where management does not possess the right knowledge and guidance, uncertainties and consequently risks arise.

In addition to the above, the rapidly changing and complex operating environment can result in uncertainty if management is making uninformed decisions without calculated risk. Furthermore, when uncertainty exists, stakeholders tend to require information from organsations to make informed decisions (Valsamakis et al, 2000; Skipper & Kwon, 2007; Masama; 2017; Chakabva *et al*, 2020).

2.4.1 Risk classification

Risk can emanate from the external environment, business strategies and policies, business process execution, analysis and reporting, and technology and data (David & Desheng, 2008; Masama, 2017).

Table 4: General business risks

Externally	**Business strategies/ policies**	**Business process**
Catastrophic loss Legal and regulatory Customer expectations Competitors	Organisational structure Strategy and innovation Business portfolio Organisational structure Organisation policies Capital allocation Organisational structure	Change Integration. Planning Process /Technology design Knowledge/Intellectual capital Technology execution and continuity Knowledge/Intellectual capital
People	**Analysis /Reporting**	**Technology/Data**
Change readiness Fraud and abuse Communication Leadership skill and competency Accountability	Performance management Contract commitment Budgeting and financial planning External reporting and disclosure Performance management Market intelligence	Technology infrastructure IT security. Data relevance and integrity Technology reliability and recovery Data processing integrity

Source; David & Desheng,2008

The following types of risks have been identified in the literature as the major risk types faced by organisations:

Strategic risk-risk that affects the achievement of organisational goals and sustainability of the organisation. Chakabva *et al.* (2020) outlined that these threats stem from unclear strategic goals, failure to assess uncertain events from both internal and external factors, failures to position the company in a rapidly changing globalised operational environment, poor governance, poor strategic business plan, decisions due to ineffective leadership and inconsistent implementation of the plans.

In the higher education context, these include failure to acquire, retain and develop talent and students, increased competition due to globalisation, internationalisation of education, e-learning, the shift in funding model and the demand for free higher education. Arguably, when risks are not effectively managed, they can threaten the survival of an organisation as evident to the challenges faced by South African HEIs, global financial crisis and corporate scandals (Cassidy *et al*., 2001; Institute of Risk Management, 2002; Allan & De Beer, 2006; Mikes & Kaplan, 2012; Moloi, 2015; Masama, 2017; Botha, 2019; Chakabva *et al*, 2020).

Financial risks-risks that may result in financial loss. In a broader term includes risk emanating from credit risk, liquidity risk, funding risk, interest rate risk and investment. Multiple studies have highlighted the importance of financial risk as it has an impact on revenue, profitability and strategy execution. In the education sector, these can include a shift in government funding for higher education and damages in properties, to mention a few (Mikes & Kaplan, 2012; Wurzler, 2013; Moloi, 2015; Masama, 2017).

Operational risks-risk associated with systems, processes, policies and most importantly the people. They are frequently seen as a human risk, due to the hypothesis that human error leads to the business operation's failure. Other studies highlighted risks, such a fraud, failures in internal controls and risk management practices that can result in losses. In the education sector, these risks include not having contingency plans in place for volatile operational events, operational theft or fraud, poor education quality and the ability to attract the best talent. (Kallenberg, 2009; Moloi, 2015; Global Association of Risk Professionals, 2011; Ayandibu & Houghton, 2017; Risk Management Association, 2017; Masama; 2017).

Compliance risks-risk that affects adherence with applicable laws and regulations. Examples of compliance risks include violation of local tax laws and violation of employment-related

laws (Johnson & Johnson, 2013). In the educational context, these risks include compliance with the Higher Education Act, internal policies including risk management best practices and compliance with international quality standards.

Hence, Chakabva *et al* (2020) highlighted that these risks are closely related to operations, as it can lead to sanctions due to non-compliance and can further cause reputational risk (Mikes & Kaplan, 2012; Risk Management Association, 2017).

Reputational risk-risk that may affect the brand and reputation of the organisation such as damage to the public image as highlighted in the compliance risk (Cassidy *et al*., 2001; Kallenberg, 2009). Recent events such as #Feesmustfall were controversial and universities were not always placed in a positive light.

Stemming from the business risk in Table 4 above by David & Desheng (2008), risk categories for HEIs and companies are similar, although the content might differ due to the operational spectrum and differences in characteristics. Both for-profit organisations and HEIs share the same risk categories as identified above and all risk stems from internal and external factors (Masama, 2017). Once the risks emanating from these categories are identified, they need to be managed using a systematic process known as "risk management" as asserted by prior literature. Henceforth, HEIs are required by regulators to adopt such processes to manage the challenges threatening their operational and strategic objectives (Cassidy *et al*, 2001; Kouns & Minoli, 2011; Hopkin, 2014; Masama, 2017; Moloi, 2014).

2.5 RISK MANAGEMENT

2.5.1 Risk management defined

According to PricewaterhouseCoopers (PWC) (2018), risk management is "the systematic process of identifying, assessing and developing risk responses to address the risk that could potentially affect the strategic objectives of the organisation". This process includes conducting an extensive assessment of potential risks that could affect the achievement of objectives (Chakabva, 2015). Every organisation is subject to unforeseen circumstances that could impact its operations, reputation and continuity. To ensure readiness for these disruptions, organisations develop risk mitigation and business continuity plans to address these risks and their severity (Goldberg & Palladini, 2010).

In a prior study by Masama (2017) the following definitions of risk management have been identified as widely used:

Table 5: Risk management definitions

Definition	Reference
Risk management refers to the understanding, analysing and addressing of risks, in order to ensure that organisations achieve their objectives	Institute of Risk Management (2016)
The identification, analysis, assessment, control, and avoidance, minimization, or elimination of unacceptable risks	*Business Dictionary* (2016a)
Risk management is a customised and systematic process that entails the appropriate identification, analysing and adequate treatment of uncertain events in and around an organisation	Bruwer (2016:xix)
Coordinated activities and methods that are used to direct an organisation and to control the risks that can affect its ability to achieve its objectives	*Risk Management Dictionary* (2016)
Process of identifying, evaluating and ranking the priority of risks, followed by a coordinated and cost-effective application of resources which focuses on monitoring and controlling the probability or impact of uncertain events	Cagnin et al. (2016:489)
Risk management is a systematic approach that aligns strategy, people, technology, processes and knowledge with the purpose of assessing, evaluating and managing the risk that an organisation faces	Dabari & Saidin (2014:629)
Process which pertains to the identification of risks, the assessment of risks and the treatment of risks	Yusuf & Dansu (2013:83)
A scientific process of well-defined, sequential steps that supports better decision making by providing greater insights into risks and their impacts	Endicott & Gardiner (2011:20)

Source: Masama, 2017

Even though, there is a wide scope of accepted risk management definitions. It is important to note the definitions above have common components such as; (1) threats identification, (2) the use of a systematic approach for identifying the potential threats, (3) to treat the identified risk by developing mitigations. Simona-lulia (2014) outlined that risk management should provide the organisation with mechanisms to classify uncertain events and produce a new vision for risk management by identifying both internal and external retrospective exposure. In recent years, there has been increasing attention on risk management in general and adoption or application of risk management strategies specifically by all types of organisations. Thus, ERM as risk management practice is widely recognised as the best practice for all types of organisations looking to manage uncertainty (Lermack, 2008; Chabava, 2015; Masama, 2017).

2.5.2 Risk management objectives

The objectives of risk management vary amongst organisations due to the difference in size, resource availability, operational complexities and the industry (Chabava, 2015; Moloi, 2014; Masama, 2017). Most times, risk management objectives are aligned with the operational and strategic objectives of the organisation. Therefore, the first step to risk management is outlining risk management objectives, which are the shared organisational goals toward ERM and what it aims to achieve for the organisation (Scheierman, 2017).

Prior literature outlined that this procedure starts by identifying business objectives, business content and risk management content. One of the most important components of establishing a risk management content is the operational environment and the organisational structure. There is a consensus among researchers regarding the significance of identifying both internal and external content for effective strategic objectives and developing risk management content. Notable, risk management content includes the best practices such as King IV, risk management objectives, risk management scope and limitations. Thus, HEIs are expected to set risk management content based on the operational environment by reference to the industry's best practices and the organisational structure (Andersen & Terp, 2006; Kouns & Minoli, 2011; Pojasek, 2013; Hopkin, 2014; Tsiouras, 2015; Moloi, 2011; Chakabva, 2015; Scheierman, 2017).

From above, it is inferred that organisations should conduct the following; (1) identify both operational and strategic objectives, (2) define risk management content and customise based on the objectives identified and (3) define risk management objectives and what risk management means in the context of the organisation as influenced by the operational environment and the governance structure of the particular organisation, risk management is not one size fit all.

Beneath are the general objectives of risk management as identified by Andersen and Terp (2006):

Early warning system for possible problems: build systems that allow for proactive risk identification before severe impact is realised. Having a system that identifies potentially disruptive events before they could even occur can assist an organisation plan better when such events take place (ContinuitySA, 2010). According to Scheierman (2017), these include building capabilities to effectively manage risk by developing strategies for anticipated risk.

Transparency: assist the organisation in determining the significant organisational exposures to risk and how risk can be extenuated. The risk identification process allows for an assessment of the potential risk exposure of the organisation (PWC, 2008). Chakabva (2015) delineated that the operations of the business should be transparent to encourage good governance and a system of effective risk management. Thus, adequate, accurate and timely information should be made available to decision-makers and stakeholders.

As discussed, the form of communication with external stakeholders is through an annual report disclosure. King IV also promotes transparency through the "Apply and Explain" philosophy discussed in the rationale of the study (Moloi, 2015; IoD, 2016)

Risk Awareness: an organisational culture that embraces risk and integrates risk in the decision-making and execution of duties. This can be achieved through risk training and awareness sessions during the risk assessment workshop (IoD, 2016; Masama, 2017). According to Chakabva (2015), these are the actions affected by management to create a risk culture that promotes the integration of risk management into daily activities and decision making.

Function within a risk appetite level: pursue strategic objectives within the monitored and pre-defined levels. In the South African content, King IV recommends the development of predefined risk appetites and tolerance levels (IoD, 2016). This is conducted to monitor uncertain events or opportunities taken outside acceptable levels as approved by the governing body. These opinions are in line with Scheierman (2017) who asserted that organisations should strive to create common risk understanding across the organisation which could result in cost-effective risk management activities.

2.6. RISK MANAGEMENT APPROACHES

Notably, all organisations are faced with risks due to external and internal factors outside the control of the organisation. Prior literature outlined that risk emanates from various factors such as operational, strategic, compliance and reporting. Thus, organisations are required to adopt risk management processes to identify the potential threats to the strategic and operational goals using a systematic approach to manage the uncertainty and the impact thereof. Furthermore, over the years, risk management has evolved, improving from lessons taken from previous corporate scandals, volatility and uncertain economic conditions. In the educational sector, the emerging risks and rapidly changing operational environmental serve as a reminder that all organisations are faced by risk regardless of industry or funding model (Tsiouras, 2015; Moloi; 2011; Chakabva, 2015; Scheuerman, 2017).

Based on the prior studies, there are two commonly used approaches to manage uncertainty known as; The Traditional risk management and Enterprise Risk Management (Hohenwarter; 2014; Masama, 2017; Chakabva, 2015; Chakabva *et al.*, 2020).

2.6.1 Traditional approach to risk

Traditional risk management is also known as a "silo approach" as many authors identify this method as a reactive model that treats risk as a mutually exclusive event. Traditional risk management can be defined as "the decision making process by managing and management or administrative activities that minimize the effects of accidents or business losses" (Simona-lulia, 2014). Previous studies highlighted that, with this approach risks are managed by different business units and divisions with their identification strategy and focus more on pure hazard risk and accidents and treat these events as an individual risk that will never interact with other risks while business processes are interrelated (Baranoff, Harrington, & Niehaus, 2005; Simona-lulia, 2014; Moloi; 2014; Masama, 2017).

These views are confirmed by Masama (2017) as outlined that, the main objective of this approach to risk management is to detect potential risk areas and develop responses and mitigation strategies to limit the exposure or potential risks that are treated in isolation as and when they occur. Historically, the scope of risk management was narrowly limited to only include incidents that resulted in a loss rather than also considering opportunities presented by risk in the pursuit of strategic objectives (Hohenwarter, 2014; Masama, 2017).

In essence, traditional risk management was motivated by accidents and hazardous risks that needed to be managed. As new challenges emerged such as the financial crisis and corporate scandals, there was an increased need for a standardised risk management approach. Hence, numerous studies asserted that the main focus of the traditional approach was on management decisions, activities by employees and mostly hazards risk per department or managed in a silo. Many of these risks were transferable through insurance (Simona-Julian, 2014; Masama; 2017; Carol, 2019; Chakabva *et al*., 2020).

Nonetheless, while events such as employee accidents at work or a data breach are insurable and can be managed in a silo or transferred to a third party, they have a reputational risk that cannot be transferred, and some risk requires collaboration between departments. Thus, treating risk in silo proved inadequate as the businesses were still failing as interconnected events were triggered by major risks such as the financial crisis and corporate scandals (Walker & Shenkir, 2008; Simona-Iulia, 2014). According to Arena, Arnaboldi, and Azzone (2011), the shortcoming of the traditional risk approach is the managing of risk

separately as a mutually exclusive event. This underestimation of risk can result in interconnected events occurring at the same time threatening business survival (Bromiley et al, 2014).

So, the Traditional approach only looks at events from a loss prevention perspective based on issues that have occurred in the past rather than possible events in the future that might threaten strategic objectives. As businesses evolved and operated in the global environment with multiple requirements and emerging risk from new technologies, risk management evolved to provide a mechanism to assist businesses in pursuit of opportunities within predetermine potential losses. Hence, the desire for an approach that integrates risk management across the organisation emerged and resulted in the current risk management approach known as ERM.

2.6.2 Enterprise risk management (ERM)

In response to the proposition to replace traditional risk management, some organisations have adopted an integrated approach to managing risk known as ERM (Power, 2007). Risk management has shifted from a technical and analytical exercise it was when risk management was introduced to the relatively new stage of organisational governance (Deloitte, 2005). According to Carol (2017), ERM goes beyond hazards to include areas that cannot be transferred nor insured and require proactive measures to anticipate risk before they even occur across the organisation rather than departmental. There has been a shift from a silo approach to integrated risk management due to the complexity of the modern economy and businesses. These can accredit to the inability to meet strategic objectives due to lack of effective leadership, complex organisational structure and the drastic changing operational environment (Power, 2007; Deloitte, 2005; Lundquist, 2015; Masama, 2017; Moloi, 2014).

2.6.2.1 ERM defined

ERM can be defined as "the method whereby organisations methodically and systematically mitigate risk related to business activities with the primary objective of achieving strategic goals" (Reuvid, 2007:65). The ERM framework aims at achieving the entity's goals, namely: operations, reporting, compliance and strategic (COSO, 2016). The Casualty Actuarial Society (2003) defined ERM as "the manner to which businesses, assess, mitigate, exploit, transfer and monitor risk to increase the entity's value to stakeholders". However, the commonly used ERM definition is derived from the COSO (2004) which state that:

"*ERM is the process effected by the entity's board of director, management and other employees, applied in strategic objective across the enterprise, designed to identify potential events that may occur and affect the entity, and manage risk to be within its risk appetite, and provide reasonable assurance regarding of entity's objectives*".

Though there are widely accepted definitions for ERM, there are common aspects in these definitions such as a methodology or systematic approach or a process of managing risk, identification of events and management of the negative effects of such events, the determination of risk appetite to manage risks and ensure risks are taken with acceptable levels in pursuit of strategic goals. Lastly, the activities should provide reasonable assurance regarding organisation's objectives (COSO, 2004; Reuvid, 2007; The Casualty Actuarial Society, 2003).

2.6.2.2 ERM evolution

The current ERM processes have developed multiple versions over the years based on best practices learned and empirically researched. Despite the movement from traditional risk management to ERM, corporate failures continued to take place. As, business failures in the 1980s and 1990 resulted in many regulators, governance oversight bodies, rating agencies insisting that businesses demand greater responsibility for managing risk (University Risk Management & Insurance Association (URMIA), 2007; Whitfield, 2003). Rightfully so, businesses started taking note of the importance of integrating risk management and investing resources for effective implementation. Moreover, corporate bankruptcies and scandals such as Enron and WorldCom in the 2000s led to increased attention to risk management practices, standards and frameworks (Aebi, Sabato, & Schmid, 2012; Masama, 2017; Chabava, 2015).

In the South African context, scandals such as Lonmin PIC's Marikane massacre, African Bank liquidation and South African university disruptions have resulted in companies experiencing increased scrutiny from stakeholders to implement an integrated risk management process (Pichulik, 2016; Pickworth, 2014; Moloi, 2015). Thus, the main drivers behind the establishment of a formal ERM program can be categorised into three categories, namely: (1) requirements by regulators to establish risk management, (b) reaction to external and internal events such as corporate failure in your industry, (c) proactive decisions (Mehta, 2010). Additionally, ERM gained significant importance as it is advocated by King IV and became one of the Johannesburg Security Exchange (JSE) listing requirements, which highlights an integrated approach to risk management. Arguable, ERM development is ascribed to business

failures and corporate scandals in attempts to provide a mechanism for measuring and anticipating potential disruption.

Preceding studies outlined that this process involves managing all possible events that threaten business objectives. ERM benchmarks the best practices and allows organisations of all types to focus on key areas of prosperity and survival. According to Carol (2017), the process of focusing on key risk is known as prioritisation based on risk with a high impact on the prosperity and survival of the organisation. Although organisations have risk practitioners with the skills to manage risk, resources have to be concentrated on key strategic risks while monitoring unlikely events with high impact (Carol, 2017; Chakabva, 2015; Scheuerman, 2017).

In the South African context, the King Code became a significant risk governance implementation framework as it recommended practices to accomplish the holistic approach to risk management (Moloi, 2015, IoD, 2002; JSE, 2016, IoD, 2016). King IV recommends assigning the oversight function to govern risk to the council, assigning implementation of risk management practices to executive management, integrating risk management into the culture of the organisation and daily actives, lastly receive assurance on the effectiveness of risk management (McShane, Nair, & Rustambekov, 2011; IoD, 2016; Kimbrough & Componation, 2009).

In ending, it can be argued that ERM practices trace its origins from the business sector due to corporate failures and scandal, resulting in a demand for an integrated approach that treats risk in an integrated approach rather than in a silo. Furthermore, the pressure from stakeholders such as government authorities and regulators played a major role in the current state of ERM, as businesses were adamant to find a solution that effectively manages risks.

Thus, organisations were formed to develop risk management frameworks. There are several frameworks for ERM such as the Committee of Sponsoring Organisations commonly known as the COSO ERM Integrated framework, the International Organisation for Standardization known as ISO 31000 risk management framework and processes, Casualty Actuarial Society ERM framework, etc. (Andersen, 2010; Kimbrough & Compotation, 2009). These frameworks share similar steps and emphasises the influence ERM has on a broad range of activities and organisational levels.

2.6.2.3 COSO: Integrated framework

The Treadway Commission was formed in the US, to study the business failures from 1985-1987. They presented their conclusions in their 1987 *Report of the National Commission on Fraudulent Financial Reporting* (COSO, 2018). This report inspired the formation of COSO together with organisations such as the American Institute of Certified Public Accountants (AICPA), the Institute of Internal Auditors (IIA), and the Institute of Management Accountants (IMA), the Financial Executive Institute (FEI), and the American Accounting Association (AAA) (Minsky, 2009).

This committee issued the Internal Control-Integrated Framework in 1992, intending to assist companies across all industries and sizes to measure the internal control structure. The framework consists of five COSO components known as control environment, risk assessment, control activities, information & communication and monitoring (COSO, 2013).

However, even though the framework assisted the organisation on assessing control, it lacked the direction to assist the organisation in establishing its controls. Hence, the COSO (2013) created new guidelines that consist of 17 internal control principles and 77 competency new principles that fall within the five COSO components. Furthermore, empirical studies highlighted that for years the 2013 COSO framework was the best standard for application and testing systems of internal control to create a risk culture that is embraced by the organisation (URMIA, 2008; Raanan, 2009; Lermack, 2008).

The latest edition of the COSO Framework was updated and published in 2017 to reflect on the emerging risk, the rapidly changing operational landscape and introduced the strategy-setting philosophy (COSO, 2017). Concurrently, with the COSO Internal Control Frameworks, the COSO ERM Framework was developed in 1992. The integrated framework consisted of four objective categories known as strategy, operations, financial reporting and compliance.
The widely used ERM framework is the 2004 COSO framework as demonstrated in figure 3 below.

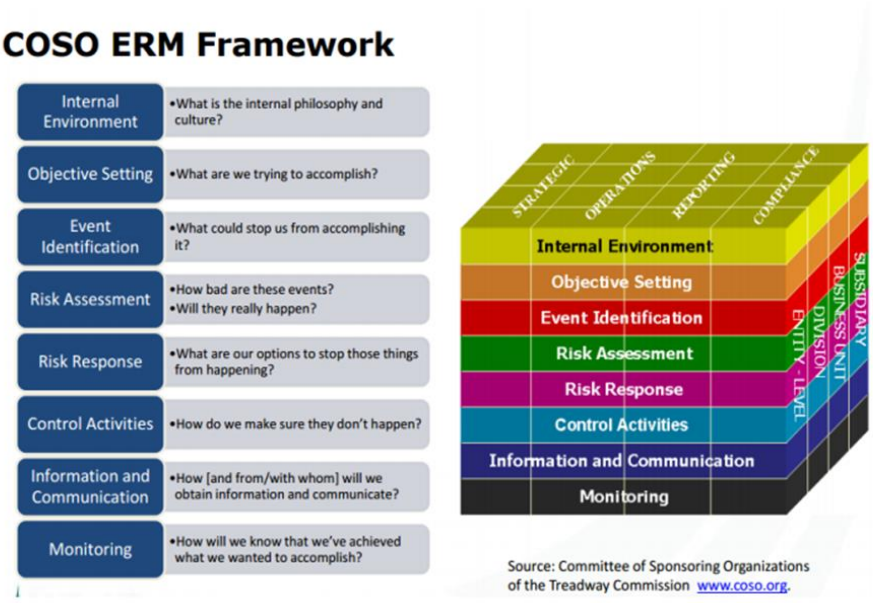


Figure 3: COSO Integrated framework (COSO, 2004)

ERM is made up of eight interconnected elements. According to COSO (2004), these elements start from the top by setting the tone, followed by setting strategic goals, identification of negative events that could affect the achievement of the identified strategic goals, design and implementation of mitigation strategies and communication & monitoring through assurance.

It was important to note, the focus and importance of objectives and the organisation's role in creating an internal environment and culture that embraces risks as the 1994 ERM framework consisted of all the components except, internal environment objective setting and event identification. Therefore, this highlights the importance of linking risk with the strategy of the organisation for monitoring and ensuring risks are taken within acceptable levels (Power, 2007; Deloitte, 2005; Lundquist, 2015; Masama, 2017; Moloi, 2014).

The following were identified as critical strategic goals to be considered during the risk management process: (1) strategic objectives relating to high-level goals and missions, (2) operational objectives relating to efficient utilisation of resources and operational efficiency, (3) reporting objectives as required by the regulator such as the Johannesburg Security Exchange (JSE) in the South African context, (4) lastly regulatory compliance requirements such as King IV and Companies Act of 2008. Furthermore, the COSO (2004) outlined ERM objectives as (1) identify and assess a wide range of risk that could adversely affect the entity's objectives, (2) ensure ownership and accountability when it comes to risks, (3) developing appropriate risk treatment and monitoring of risks by risk owners, (4) establish a structure of leadership that engages in the process of identifying and assessing risks throughout the

organisation. (5) lastly, provide risk management information throughout the organisation and ensure risk is embedded in operational activities (COSO, 2004; Moloi, 2015; IoD, 2016; Republic of South Africa (RSA), 2008).

The highly anticipated updated version known as "ERM-Integrating with strategy and performance" was issued in 2017, with the aims of turning a "preventative and process-based risk management" into proactive, opportunity focused conversation on how risk-managed can create value when taken within acceptable risk levels. the 2004 ERM framework assisted organisations to improve risk awareness and keep up with the changing operating environment. However, there was a need to improve reporting and disclosures due to increased scrutiny by stakeholders. Therefore, the COSO ERM framework (2017) outlines the importance of considering risk in strategy setting as emphasised by previous versions of the COSO framework and driving performance as introduced by the new framework (PWC, 2017; COSO, 2017).

In the South African context. King IV promotes integrated risk management reporting through detailed disclosures, embedding risk into the strategic objective and resource allocation (IoD,2016). Moreover, ERM is used as a performance measure for the organisation, department and risk owners (COSO, 2017). King IV is the most important governance framework. It is not an ERM framework, yet it provides recommendations on risk management practices for effective risk management based on best practices and provides provision for an organisation to apply any other practices deemed required and effective by the governing body (IoD, 2016). Stemming from above, ERM aims to define both operational and strategic objectives, identify events that could disrupt the achievement of the different types of business objectives, develop and implement risk responses to manage the disruptions. Additionally, communicate through reporting and monitoring. Receive an independent and objective assurance on the effectiveness of the implemented risk management process throughout the organisation. Lastly, ERM emphasises the role and commitment of leadership and management on the rollout of effective integrated risk management.

2.6.2.4 ISO 3100: Principles and guidelines

The International Organization for Standardization (ISO) also developed and issued a standard for risk management in 2009. The core basis for ISO31000 is the emphasis on strategic objectives and management of any issues that impede the achievement of the objectives (ISO, 2009).

The ISO 31000 principles establish the philosophy and values of the risk management process by linking risk management principles together with organisational objectives and visions. Hence, the main element of this approach is integrating risk management into the operational business activities for effectiveness (Association of Insurance and Risk Managers, 2010). This risk management process establishes five steps for risk management known as; (1) identification of risks, (2) development of mitigations, (3) select appropriate responses, (4) implement mitigation and controls, (5) monitor results through assurance (Masama, 2017; ISO, 2009).

Deduced from above, the ISO 31000 components and processes outlined are parallel to those of the COSO framework as both frameworks outlined the utmost importance of strategic objective setting, event identification, developing mitigation plans and monitoring of the effectiveness of the risk management process. Thus, it can be established that these elements form an important basis for risk management integration and embedding.

Additionally, both the COSO (2016) and ISO (2009) guide and highlights the importance of the role that the board or the council plays in the implementation of effective risk management.

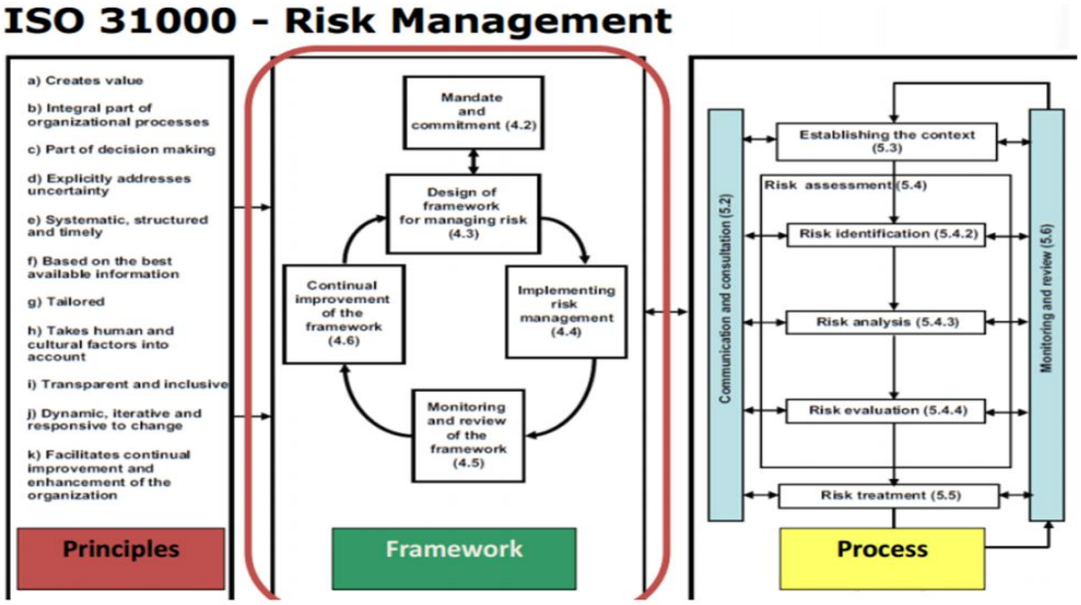


Figure 4: ISO 31000 risk management framework (ISO, 2009).

Figure 4 above illustrates the principles, the cycles of the framework and most importantly the risk management process as discussed above.

2.6.2.5 ERM process

As determined above, both the COSO and the ISO 31000 framework follow a comparable process and place importance on integrating risk management with strategic objectives and operational activities. The Casualty Actuarial Society (CAS) (2003), also conceptualised a risk management process, which is mostly consistent with the COSO and the ISO 3100 processes. Below is the step by step process of risk management, which consists of five steps and these steps are uniform within the frameworks discussed above (Moeller, 2007; Chapman, 2006; COSO, 2016; ISO, 2009; Masama, 2017; Chabava, 2015, Dubihlela & Nqala, 2017):

Business analysis: this is the process of identifying both operational and strategic objectives. COSO and ISO 31000 acknowledge that all forms of organisations exist to provide value to stakeholders, hence, organisations need to set clear and executable objectives (Achampong, 2010).

Risk identification: once, the strategic objectives are identified. This process identifies issues that could negatively affect operational and strategic objectives. Furthermore, this procedure can be conducted by the chief risk officer, risk manager and risk committee. It usually involves using methodologies such as risk management workshops leading to the development of operations and strategic risk register (Aabo, *et al.,* 2009).

Risk analysis: once risks are identified; this process quantifies by assessing the likelihood of the risk occurring and the impact for prioritisation as not all risk requires the same resources and response.

Risk response planning: This is the process of developing and implementing risk response strategies depending on the risk appetite of the university and tolerance level. The organisation can respond to risk by avoiding, reducing, and transfer.

Risk monitoring: this is the final step that involves monitoring the performance of the risk responses and evaluates if new risks emerge. This is accomplished by receiving assurance on the effectiveness of the systems on risk management and continuous scanning of the external and internal environment.

According to Gallagher & Co (2009) as well as Rowley (2013), risk responses consist of: the reduction of the likelihood of the risk occurring; the control of damages after the risk has occurred; transfer of risk using third party insurance; acceptance of risk by developing

mitigation to manage the risks; and the avoidance of risk due to expensive control implementation when compared with the impact.

Figure 5 below illustrates the relationship between the core risk control with the two-strategic approaches to risk management categorised as risk control and risk finance.

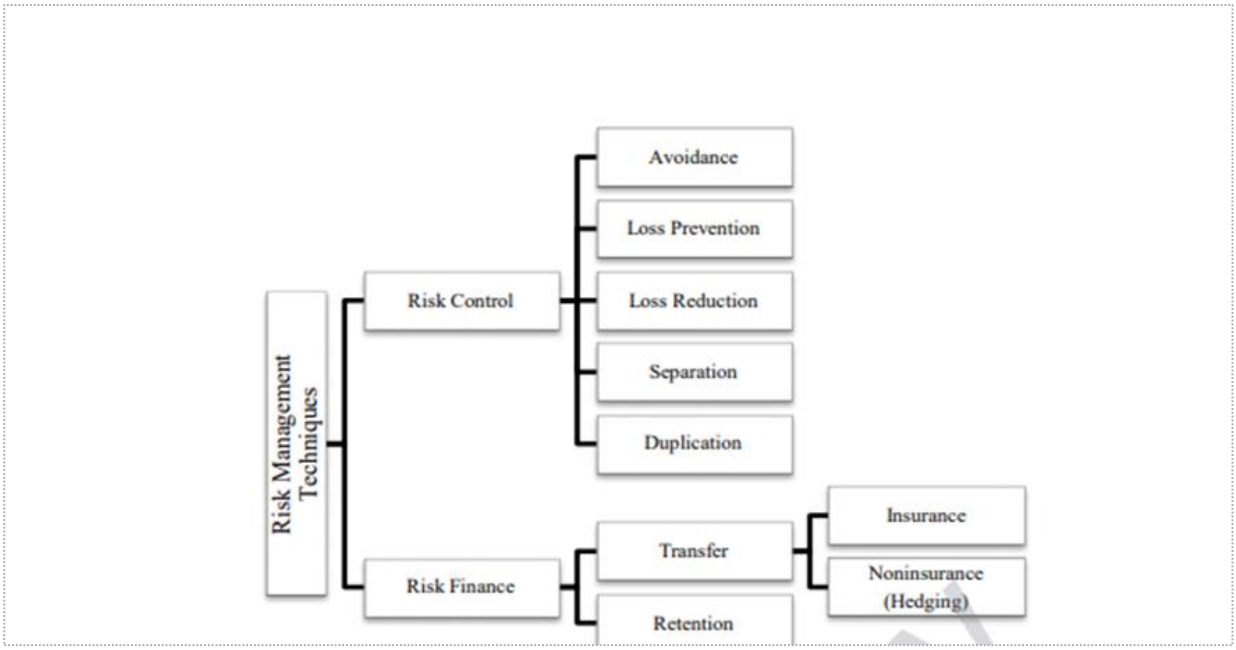


Figure 5: Risk responses (Gallagher & Co, 2009)

Risks are assessed and the suitable risk responses are selected to manage risk within an acceptable level. Risks are then monitored by receiving independent periodic assurance on the effectiveness of risk management to improving the processes as discussed above (IoD, 2016). Furthermore, the implementation of integrated risk management requires the right structure and process in place, and that is known as corporate governance which is discussed in the following section.

2.7 RISK GOVERNANCE

It is important to note that before risk governance is discussed, the concept of corporate governance is explained as the two are interconnected. Even if it is just a compliance checklist, an organisation cannot exist in this day and age without any corporate governance practices (Zhu, 2016; Fernando, 2009). Therefore, corporate governance is "a system implemented by the organisation which defines policies, procedures, guidelines and decision structures within the organisation" (Nerantzidis & Tsamis, 2017).

Corporate governance gained its importance owing to fraudulent activities taking place within organisations. Subsequently, organisations had to create structure, policies, procedures and guidelines for good governance as the board is assigned with the responsibility to govern in such a way that supports business objectives (Wilkinson, 2014). However, there is no universally accepted definition of good governance, as multiple authors highlight the achievement of results based on principles, transparency and accountability within the right structure (Sudhakar, 2009; Zhu, 2016; Kasmi & Kamila, 2018; Fernando; 2009

Moreover, good governance is seen as having a strong system of internal controls and risk management strategy as it promotes accountability and responsibility through establishing decision structure, policies, procedures and guidelines. Hence, risk governance forms part of the overall corporate governance strategy of the organisation and can be defined as "the process to which the board/council through management establish an entity's strategy that articulates and monitor compliance to risk appetite. identify, evaluate and manage risk" (Gontarek, 2016:03).

According to risk governance guidelines by PWC (2019), risk governance consists of the following components:

- The *structure* within which risk management operates in an organisation. Once the structure is in place risk governance sets responsibilities throughout the organisation so that everybody is aware of their duties and accountabilities. In the South African and HEIs context, King IV recommends the council to establish a risk committee or add to the responsibilities of an existing committee to govern risk, this committee should be delegated with an oversight role on matters of risk management (IoD, 2016).

- The COSO framework highlighted the importance of leadership for the effective risk management program. Furthermore, King IV, recommends the structure to consist of executive and non-executive members, with non-executive as the majority (COSO, 2016; IoD, 2016).

- The *approach* by which an organisation undertakes risk management. The approach should reflect or seek to reflect the organisation's risk culture as risk governance is an integral part of the day to day activities of the organisation. Also, King IV recommends an integrated approach to risk management that embeds and integrates risk management into the day to day activities and decision-making. Both the COSO and ISO 31000

framework as discussed guide the process of risk management from risk identification to monitoring. Additionally, the approach should be endorsed and approved by the board, and management should be devoted to effective implementation (IoD, 2016; ISO, 2009; COSO, 2016).

- Provides *guidance* for sound decision-making and effective allocation of resources within acceptable risk appetite. Furthermore, the COSO framework and ISO 31000 guide the implementation of risk management, highlighting establishing risk appetite levels. In the South African setting, King IV recommends practices and principles which should be adopted, applied to govern risk and disclosure on the application of corporate governance (ISO, 2009; COSO, 2016; IoD, 2016.

This is further supported by Gontarek & Co (2016) as the following were identified as the four most common risk governance structures that should be in place:

- *A risk committee*- formations of a committee assigned with a responsibility to govern risk. However, there are different views if the risk committee improves risk oversight of the organisation. A study by Protiviti Inc, (2011) supports the motion by stating that, having a separate risk committee provides room for the audit committee not to pay more attention to operational risk and focus on financial reporting responsibilities. Whyntie (2013) added that unloading the audit committee by forming a risk committee gives risk management a higher priority. Whyntie (2013) also specified that having different board committees may create more layers of bureaucracy.
  In this regard, a study was conducted between 2003 and 2011 demonstrated that having a separate risk committee is associated with high audit fees (Hines et al., 2015), hence, some organisation prefers an audit committee that handles both audit and risk management issues

- *Chief risk officer*- an individual who oversees the entity's wide risk and should be given a certain level of authority and access to the board. This role differs from organisation to organisation depending on the size of the organisation or operational complexity.
- *Culture*- the organisation needs to set the tone at the top by establishing a code of conduct, policies and training programs on risk and ethics. King IV highlights that it is the responsibility of the board to establish a risk awareness culture and integrating risk management in daily activities (IoD, 2016). The board, the risk committee and management are tasked with the responsibility of a corporate culture that allows and

promotes an effective ERM process (Cohen, 2015). The main contributors to the required corporate risk culture are senior management by setting the tone at the top, prioritising, and reinforcing the organisational culture (Masama, 2017).

Barton & MacArthur (2015) highlighted the importance of risk culture for risk management success within an organisation. They further outlined that, while risk culture starts with the board and management, it should be part of day to day life of the organisation for risk management to be effective as the organisation should embrace risk (Barton & MacArthur, 2015; IoD, 2016).

- *Risk Appetite statement*. COSO (2004) defined risk appetite as the extent of risk the organisation is willing to take in pursuit of its strategic objectives. In the South African context, the King IV report on corporate governance recommends that the council needs to determine the level of risk acceptance and risk appetite yearly. Once the levels are determined, risk needs to be monitored and maintained within an acceptable risk tolerance level (IoD, 2016).

Noted above, are the most important components to govern risk by ensuring there is a structure in place with well-defined responsibilities, accountabilities and commitment to risk management. Additionally, the council is responsible for the adoption of risk management processes which should be integrated in daily operational activities and embedded in the culture of the organisation. Lastly, the importance of risk appetites in ensuring risks in pursuit of strategic goals are taken within predetermined acceptable levels.

2.8 RISK GOVERNANCE MATURITY

In the South African setting, King IV as a framework for governance recommends management to govern risk in a way that supports the achievement of organisational objectives (IoD, 2016; Moloi, 2016). However, risk management application differs from organisation to organisation as it requires time and resources for effective application as some organisations may not have the resource to apply risk management in their full context (Wilkinson, 2014).

It is significant to note that, governing risk does not follow an organisational life cycle approach where an organisation initiates risk governance and after some time reaches good or mature governance. It is possible for a newly established organisation with the right structures and systems in place to have mature risk governance, compared to an organisation that has existed for years without building the right systems and structures. Therefore, risk governance is subject to resource availability, commitment to good governance and not determined by

organisational maturity (Rehman & Hashim, 2018; Wilkinson & Plant, 2012; Wilkinson, 2014).

Risk governance forms part of the overall corporate governance strategy, therefore, it is subject to organisational corporate governance maturity (Rehman & Hashim, 2018). In which according to the Institute of Internal Auditors (IIA) (2016) "is the extent to which an entity has established and implemented an adequate governance framework. Also, the board, executive management and employees are adhering to such governance framework".

Some organisations have a well-mature governance framework in place which is successfully implemented and effective. While, some may be immature in terms of governing their risk due to the lack of a well-established governance framework and structure in place (Wilkinson & Plant, 2012; Rehman & Hashim, 2018). Furthermore, a governance maturity framework provides levels of maturity in which an organisation can measure and benchmark its risk governance practices (Switzer et al., 2015). Hence, according to RIMS (2009), the main goal of risk governance maturity is to improve the impact of risk governance and provide value to the organisation by acting as a competency standard to assess risk governance maturity.

Based on the study by Lockhart (2011) the following are the characteristics of both mature and non-mature governance:

Non-Mature- lack of independence, centrally controlled, no segregation of responsibilities, no decision structure, no formal meetings and minutes and lack of approved policies.

Mature- there are independent directors, policies, procedures in place and updated annually. Furthermore, governance is managed within structures and reporting lines, decisions taken are documented and the board meets regularly.

The challenge to corporate governance is the question of what is considered "good corporate or risk governance" and how can one assess the maturity of such practices, as the case with King IV recommended practices, which do not offer measures for mature and non-mature corporate governance (Wilkinson, 2014; Rehman & Hashim,2018). Nevertheless, organisation assesses their governance practices in a silo without realising as each division have its compliance and control checklist or questionnaires. Therefore, for a formal governance maturity assessment, an organisation ought to adopt a governance maturity framework to measure the maturity of their governance practices including risk governance as it forms part

of overall governance (Massie, 2012; Roberta *et al*, 2008; Wilkinson, 2014; Rehman & Hashim, 2018).

Besides, organisations need to continuously assess their risk governance maturity as such assessment will determine blind spots and areas of improvement in their systems of risk governance. consequently, in recent years there has been a demand for a framework that measures corporate governance in general and risk governance to be specific. This framework should be able to measure governance maturity as new governance codes and principles are adopted and implemented (Bhasin, 2013; Wessels & Wilkinson, 2016). The Risk and Insurance Management Society (RIMS) have developed a risk maturity model to assist organisations in managing their risk effectively and provided criteria in which organisations can assess their risk governance (Coetzee *et al.,* 2010; Rehman & Hashim, 2018).

The framework act as the implementation guide which details the minimum requirements for effective ERM. As well, as the 25 competency drivers for risk management maturity and attributes that create ERM's value (RIMS, 2009; Rehman & Hashim, 2018). The RIMS (2009), is based on the capability maturity model, a methodology developed by Carnegie Mellon University Software Institutes (1980) and outlined the following attributes as the minimum risk governance components:

- ERM based approach
- ERM process management
- Risk appetite
- Root cause analysis
- Uncovering risk
- Performance management
- Business resilience and sustainability

Since the framework is a capability-based model, the organisation should assess its risk governance practices against the 25 competency drivers which act as a proxy for the minimum risk governance requirement. However, in the South African context, though King IV is the main framework for governance, including risk governance as it provides recommended practices to govern risk. Previous studies revealed that there are shortfalls in the King Codes frameworks as they all provide recommended practices or principles to be applied for effective risk governance without providing criteria to measure the maturity of the applied practices (IoD, 2002; IoD, 2009; IoD, 2016; Coetzee *et al.,* 2010; Wilkinson, 2014).

Consequently, Wilkinson and Plant (2012) explored the gap as they developed a governance maturity framework to outline the important attributes and modes of maturity to measure governance in the South African context including risk governance as it forms part of corporate governance strategy. While the study heightened and improved on the shortcomings of the previous King Code, it is important to note that King IV was not introduced as yet when this governance maturity framework was developed. Therefore, the framework is based on previous King Code practices. Nonetheless, the development of the framework started with the process of reviewing other maturity frameworks to develop the best corporate governance framework applicable to the South Africa governance setting. Thus, it becomes an implementation guide that highlights the minimum requirements for effective governance including risk management without being limited to certain governance practices or risk management frameworks (IoD, 2016; Wilkinson & Plant, 2012).

Several studies highlighted that the governance maturity model consists of the following elements:

Attributes- refers to the qualities and characteristics which can be associated with an organisation's governance framework (Wilkinson & Plant, 2012; Wilkinson, 2014; Rehman & Hashim, 2018).

Modes of maturity- refers to the different layers of the organisation risk governance maturity and gives a summary of the extent to which risk management framework has been implemented (PWC, 2016; Wilkinson & Plant, 2012; Rehman & Hashim, 2018).

Table 6 below provides an overview of the governance maturity attributes and explanations.

Table 6: Governance maturity attributes

Governance Attributes	Explanation
Capability	Refers to the skills, knowledge, and abilities of the governing body and the risk management team in managing risk.
System/Structure	Refers to the formation of relevant structures with the appropriate assignment of responsibilities and accountability to support risk governance. According to King IV, these include councils, risk committees, and risk officers (IoD, 2016). These

	are also dependent on the size, complexity, and nature of the organisation.
Processes	This relates to risk management processes in place to effectively govern risk, these processes should be well-defined and applied consistently. King IV recommends risk management practices an organisation can adopt to effectively manage their risk including the adoption of formal ERM.
Communication and Reporting	This relates to the ability of the organisation to transfer information regarding risk management to all relevant stakeholders. This also includes integrated reporting.

Source: Wilkinson & Plant, 2012

From the above, the governance maturity attributes are consistent with the ERM frameworks and the recommendations of King IV. The framework highlighted the establishment of a risk management structure, which possess the correct knowledge and skills to affect risk management. Additional outlined an organisational culture that embraces risk, the adoption and implementation of a process for risk management including risk appetite definition. This process should be in place and integrated into the daily bodily processes and decision-making (IoD, 2016). As well, monitoring and communication of risk management related issues and assurance on the effectiveness of risk management processes. These attributes are used as categories of governance maturity, an organisation that has effectively implemented these attributes as per the framework is considered well-mature in terms of governance (Wilkinson & Plant, 2014; PWC, 2019).

The second component of risk governance maturity is the modes of maturity for measuring. The three-level approach is demonstrated in table 7.

Table 7: Governance modes of maturity

Maturity rating scale	Mode of Maturity	Explanation
Rating 1	Forming risk management	This refers to the initial stage of risk management and the organisation either doesn't see the value of the identified attributes of do not have the necessary resources For example, an organisation may only produce a risk register on an ad hoc basis

Rating 2	Compliant risk management	The attributes identified in Table 6 are adopted to the extent that the organisation ensures compliance with the minimum requirements. For example, compliance with King IV and listing requirements rather than seeing the attributes as value-adding
Rating 3	Matured/ risk Intelligent	The organisation sees the value added by risk management and pro-actively implement the recommended practices. Risk management is embedded in decision-making such as conducting RADMs (Risk in decision-making) and risk modelling/Quantification.

Yet, the commonly used risk maturity framework is the multiple level approach that consists of five modes of maturity (PWC, 2019; Rehman & Hashim, 2018). Figure 5 below illustrations the different modes of risk governance maturity constructed by the researcher as per the multilevel maturity framework (PWC, 2016; The Association for Federal Enterprise Risk Management (AFERMS), 2018).

Figure 5 Modes of risk governance maturity (Author's construction)

Figure 5 above illustrates the multi-level modes of risk governance maturity together with the minimum risk governance requirements with each level of maturity as guided by the governance attributes.

The initial states of risk governance with the lowest known as Nascent and the highest maturity level being Advanced. Organisations should establish the risk governance attributes discussed, which consist of risk governance structure assigned to an oversight role to govern risk, the process of risk governance adoption, commitment/endorsement, and integration of risk management into the culture, daily actives and decision making processes. This can be achieved by determining the risk appetite, risk monitoring and communication. The framework further outlined that, an organisation does not necessarily have to apply the exact practices as they are minimum requirements to govern risk. An organisation can be at a lower level of maturity and apply the minimum requirement of a higher level due to continuous improvement and partial adoption of risk management practices. According to AFERMS (2018), the implementation of these practices and structures requires resources and dependent on the size of the organisation. Notable, the minimum requirements are uniform with the discussed frameworks and King IV's recommended practices on risk governance (PWC, 2016; Wilkinson & Plant, 2014; IoD, 2016; COSO, 2016; ISO, 2009; Rehman & Hashim, 2018).

Using the identified attributes, organisations can adopt and implement minimum risk governance requirements for effective risk management. The modes of maturity can be used to measure against the minimum requirements, assess the extent of implementation and what can be done to improve as per the competency drivers.

Stemming from above, it is important to note that the identified risk governance minimum requirements are consistent and within similar attributes. Furthermore, RIMS is a risk maturity framework and uses the multilevel approach as the attributes are specific to risk management. Likened to the other discussed risk maturity frameworks which cover governance as a whole including risk governance. It can therefore be reasoned that there are different levels of risk governance maturing with the lowest being the organisation conduct risk on an ad-hoc basis, followed by a stage where the risk structure is formed with roles and risk management processes established. The third level is known as the Integrated-level as risk governance structures are in place and risk management is integrated into the operation of the organisation. The last two steps being a well mature environment where risk forms part of the strategy,

decisions and execution of duties by the governing body (IoD, 2016; Rehman & Hashim, 2018).

To conclude, organisations should be assessed on the maturity of their risk practices and should have implemented the recommended minimum risk governance requirements (PWC, 2016; Rehman & Hashim, 2018; The Association for Federal Enterprise Risk Management (AFERMS), 2018). Moreover, the modes of maturity of the multilevel maturity framework developed by AFERMS are consistent with the RIMS framework which identified 5 modes of maturity known as; Adhoc, initial, repeatable, managed and leadership (RIMS, 2009, Coetzee *et al*., 2010; Rehman & Hashim, 2018).

2.9 RISK MANAGEMENT IN THE HIGHER EDUCATION SECTOR

2.9.1 Recent developments

South Africa is home to some of the best universities in Africa, with a reputation for delivering quality in research and teaching. These universities attract students and talent from all over the globe and collaborate with international universities (Reygan, 2016). Consequently, there is increasing attention and desire for South African HEIs to continue striving and producing top, skilled, competent workforce and future leaders as education has a role to play in the prosperity of the South African economy (Allais, 2012). Nevertheless, in recent years South African universities have not been able to escape their fair share of challenges as a result of difficult operating conditions, regulatory pressure and increasing uncertainties (Chetty & Pather, 2015; Moloi, 2016).

Additionally, Kageyama (2014) asserted that HEIs are experiencing some operational difficulties to survive in a complex, fast-changing and competitive educational sector, due to the lack of funding, student disruption, globalisation, e-Learning and increased competition. Thus, HEIs are now taking initiatives to improve their capabilities and resources to manage and monitor risks (Kameel, 2007; Moloi, 2016). It is noteworthy that all organisations are faced with risks either stemming from strategic, operational, financial and compliance environments regardless of the economic sector (Kameel, 2007; Moloi, 2015; Masama; 2017). Consequently, HEIs are not exempted from risks due to the complexity of their operating environment and lack of effective leadership (National Association of College and University Business Officers (NACUBO), 2009; Moloi, 2016).

Even so, there are fundamental differences between a for-profit organisation and HEIs such as the source of financing, strategic objectives and leadership effectiveness as they operate in a distinct environment (Chetty & Pether, 2015). Furthermore, HEIs have ambiguous goals, lack effective leadership and problematic technology. South African universities rely on the government for funding. Hence, it is hard to effectively manage these institutions due to a lack of funds and political influence (Gibbons; 1998; Mncube, 2013; Moloi, 2016).

However, according to Kageyama (2014), HEIs are resistant to change as for decades relied on the same operational model. This resulted in the recent disruptions as the new generation of students has different expectations such as free higher education due to mass education of the previously disadvantaged races (Moloi, 2016). South African universities have been forced to change their long-term plans due to the rapid challenges and increased pressure to ensure sustainability (Moloi, 2016). Consequently, South African universities had to develop and implement response strategies to proactively manage these challenges. Hence, a significant component of this process is to strengthen the ERM at universities to ensure uncertainties have been identified, assessed and strategic responses are developed to mitigate such uncertainty (Moloi, 2016).

From the above, it is deduced that HEIs have been confronted with challenges such as lack of funding, vandalism, competition, e-Learning and globalisation, due to the complex and changing operational landscape, organisational culture and lack of effective leadership. In undertaking to manage risk and ensure sustainability, universities adopted risk management practices from the business sector. Universities are perceived as substantially different from other profit-generating entities and non-profit organisations due to their strategic goals, social organisation and operational complexities.

Organisations are faced with risk stemming from strategic, operational, financial and compliance environments regardless of the economic sector. This is due to the complex risk profiles as most of the risks in the profile originate within the universities due to aspects such as unpaid student loans, ineffective leadership, procurement practices, IT network integrity and student violence on campus. Moreover, risk stems from outside factors such as competition, scrutiny from regulators, government agencies, e-learning, globalisation and lack of funds to pursue strategic goals and remain competitive at globalised environment (Chetty & Pather, 2015; Moloi, 2015; Kageyama, 2014; McDaniel, 2007; Kameel, 2007; NACUBO, 2009; Wade, 2011).

Furthermore, potential risks in an educational context originate from the challenges inherent to their operation which are not faced by other type organisations such as observation of the quality of education, residential, infrastructure, attraction, and retention of students and collaboration with other institutions (Wilson, 2013).

As the university governance structure has been discussed, the structures are directly required in the implementation of ERM processes at the university as they should set the tone at the top as recommended by the COSO framework (COSO, 2017; IoD, 2016). Gurevitz (2009) concluded that, although the ERM concepts are useful for HEIs, they are frequently presented in a complicated manner and difficult to translate to the educational sector. According to NACUBO (2007), this is ascribable to the lack of buy-in from management, clear role and objectives, lack of risk content and involvement of top management in an effective ERM program. Thus, according to Brewer and Walker (2011), universities increasingly recognise the significance of effective risk management. However, their main focus has been on prevention of risk from occurring and management of risk after the event, as few universities integrate risk within their quality assurance regime or strategic planning.

Additionally, Abraham (2013) stated that many universities recognise that having an effective risk management process that is fully supported by the council increases the likelihood of achieving the objectives of the university. Also, allows better allocation of resources and increases transparency in uncertain times as channels of information are within a systematic process. It can be said that risk management helps an HEI maintain its competitive edge, sustain its integrity, reputation and effectively manage risks (Rehman & Hashim, 2018; Moloi, 2016, IoD).

2.9.2 Risk drivers in the university environment

Universities are often associated with a small city as they consist of different campuses, faculties with different heads and stakeholders, industry and compliance requirements (Kageyama, 2014). Thus, risk managers are challenged with the daunting task of identifying and treating complex risks throughout different campuses with different structures and procedures.

Additionally, universities have a higher loss rate than industry sectors due to vandalism and lack of funds for strategic objectives. The cost of claims at universities for both financial and reputational damage can be significant due to their reliance on government subsidies, the

operational complexity and the competitive operational environment with global players and the introduction of e-Learning (Bubka & Smith, 2015; Brewer & Walker, 2011).

According to Kageyama (2014), the risk in an educational sector stems from the following:

Increased responsiveness and accountability- universities are expected to account for the employer's needs when producing graduates. It was highlighted that universities have different industry expectations based on faculties.

These stakeholders provide sponsorship in exchange for research. However, there should be a clear policy and processes to engage in these collaborations

Broader student expectations-this pertains to the importance of the image portrayed by the organisation to attract high-quality students and lecturers. Universities operate in a complex setting and consist of various cultural dimensions with different interests and stakeholder expectations. South African universities have not been capable to escape their fair share of challenges as a result of difficult operating conditions, vandalism and increasing uncertainties due to a shift to provide free higher education which was not met (Chetty & Pather, 2015; Moloi, 2016).

Competition- there is increased competition for students and lecturers on the worldwide marketplace for tertiary education. South Africa is home to some of the best universities in Africa, considered to be top performers in research, teaching, and attracts students from all corners of the globe (Reygan, 2016). These views are supported by Botha (2019) who asserted that the internalisation of education and globalisation have a role to play in the outlook and future of education. South African universities are having some operational difficulties to survive in a complex, fast-changing, and competitive educational sector as a result of the lack of funding, e-learning, and increased competition due to online learning (McDaniel, 2007).

Increased external scrutiny-the activities of universities are often under review to monitor compliance with regulations and stakeholder's requirements. In the South African context due to recent events, South African universities have been under scrutiny from different stakeholders and regulators (Moloi, 2015). PWC (2014) has observed an increased degree of complexity in the HEIs business due to regulatory changes, rapid technology changes, and increased scrutiny and demand.

Entrepreneurialism- universities are increasingly engaging with the commercial world to look for partnerships for research funding and output commercialisation. These collaborate consist

of different expectations and prerequisites which can be detrimental to the universities as the business sector is a different territory.

Information technology- the progression of technology has affected universities in areas such as the introduction of e-learning and automation of student support such as online application and registration.

Likewise, the failure to effectively manage risks can lead to universities not meeting their objectives and jeopardise their survival (Rustambekov, 2010). Consequently, HEIs have adopted and implement ERM practices to manage risk and external demands (Moloi, 2016). ERM has been widely implemented by private companies to improve their operations by standardising risk management across the organisation. Hence, according to Coetzee and Lubbe (2013), risk management has not been widely studied in education institutes, most research has been on corporate governance in the educational context (Barac, Marx & Moloi, 2011). Consequently, a deeper understanding of how universities manage their risks has become urgent as a result of the challenges of the recent events South African universities are confronted with.

2.9.3 ERM processes transferability to universities

A study conducted by Whitfield (2003) evaluated the feasibility and transferability of risk management frameworks, processes from a for-profit organisation into HEIs and concluded that the corporate sector's integrated risk management framework can be used by HEIs. Moreover, the study observed that risk management is customisable to the operating environment as it is not one size fits all. The adoption of ERM is popular and largely used by the for-profit corporate sector. Yet, ERM has been the best risk management practice for all cases of organisations including non-profits, universities and government organisations (Lermack, 2008).

In the United States of America, the Association of Governing Boards of Universities and Colleges (AGB), the National Association of College and University Business Officers (NACUBO) and University Risk Management & Insurance Association (URMIA) have developed several white papers and presentation on ERM applicability on HEIs. They have concluded that the ERM process applies to the HEIs, as it does to any organisation. These research papers outlined that, even though HEIs are unique in terms of their setting, it is

possible to implement ERM effectively as long there is a commitment from management and resources are made available (URMIA, 2008; Raanan, 2009; Moloi, 2015).

2.10 RISK DISCLOSURES

Due to regulations and compliance requirements, HEIs are required to report on their performance and operations, including risk management arrangements (Moloi, 2016; RSA, 1997). These disclosures are made using annual reports as the main drivers to present corporate information to stakeholders outside the organisation (IoD, 2016).

Besides, stakeholders rely on the information contained in the disclosures to make informed decisions. Hence, the annual report is seen as a public document that allows the organisation to decode information for the public to make informed decisions on operational efficiency and sustainability of the organisation (Adamu,2013). Prior studies on risk reporting revealed that high-risk disclosures can improve transparency and confidence between the organisation and stakeholders. This can be accomplished by providing stakeholders with adequate, accurate and timely information for decision-making. Thus, providing stakeholders with insufficient disclosure means management has more information than stakeholders, which is seen as dishonest as funders cannot make informed decisions. Therefore, it is in the best interest of the organisation to meet stakeholders' expectations and compliance requirements (Adamu, 2013; Louw, 2016). These views are consistent with the requirements of King IV, as the King code promotes qualitative disclosure (IoD, 2016).

From the literature above, it is important to mention the influence of business failure in driving stakeholder requirements for transparency through disclosures. Hence, risk disclosure is widely considered in the business sector as these types of organisations have clear strategic goals and their main objectives are to deliver the value expected by stakeholders.

2.10.1 Risk disclosure requirements in South Africa

Risk disclosures can be mandatory as required by regulators or voluntary for best practices and transparency to stakeholders. In the South African context, the Johannesburg Security Exchange (JSE) listing requirements, the King Codes of corporate governance as published by the Institutes of Directors South African and the Companies Act of 2008 requires organisations to apply and explain the risk management practices adopted as set out in the King IV Code. Furthermore, King IV recommends organisations to disclose their risk management

practices as applied, qualitatively. King IV introduced the "Apply and Explain" concept which required the organisation to disclose the incorporated recommended practice and to replace the previous King III's "Apply or Explain" concept which did not require disclosures on the actual practices adopted. Besides, the regulatory requirements and King IV recommendations, risk disclosures gained importance as the results of the drastically increasing organisational complexities and changing environment which created uncertainties for future sustainability. Corporate scandals have contributed significantly to the requirement of disclosures. Therefore, reporting requirements with stakeholders on risks introduced new requirements and concepts to strengthen risk governance disclosures (JSE, n.d.; the Republic of South African (RSA) Companies Act, 2008; IoD, 2016; PWC, 2014; Moloi, 2015; Barac & Moloi, 2011).

Both King III and King IV make recommendations for the board to comment on the integrated report on the system of risk governance. Also, King IV requires the council to satisfy itself on, the execution of its duties regarding risk management processes effectiveness and risk management practices. The annual report is used as the mode of disclosure and communication with external stakeholders. Furthermore, reporting activities by universities is administered by the Higher Education Act 101 of 1997 (RSA, 1997) as guided by the King Code on corporate governance and Implementation Manual for annual reporting by HEIs issued by the Department of Education (DoE, 2016, IoD, 2009; IoD, 2016). While the Higher Education Act provides little information on reporting requirements such as the format and content to be disclosed in the annual report. Reporting requirements for HEIs are covered by the Implementation Manual, which are prescribed by the Department of Education for the regulation of the annual reporting and act as a supplementary guide for reporting (Act No, 101 of 1997).

The Implementation Manual covers all areas of reporting ranging from financial reporting to non-financial and provide the format and content of required disclosures. The non-financial report is guided by King IV disclosure requirements on corporate governance. In the risk context, the Implementation Manual as per the Higher Education Act highlighted that the potential risk needs to be identified and their anticipated impact on the institution should be assessed. Also, the identified risk should be allocated to a department or risk owners to manage that risk and ensure that it is maintained in the risk register (Higher Education Act, 1997; Moloi, 2015). The Manual further highlighted that the scope of risk management within the institution

need to be clearly defined, the individuals or committee responsible need to report at least annually on risk matters. The risk report prepared by the risk committee or chief risk officer should be included in the annual report and signed by the chair of the risk committee.

Subsequently, these are consistent with the discussed frameworks and the risk governance recommended practices as they outlined the importance of risk assessment, risk appetite, and risk governance structure through a risk committee (Act No 101 of 1997; IoD, 2016; COSO, 2016; ISO, 2009).

2.10.2 Roadmap to King IV application disclosures

According to King IV IoD (2016), the council has the discretion to identify how King IV disclosures will be made, whether disclosures will be included in the annual report, social ethics reports, risk management report, sustainability report, online or printed reports. Thus, the governing body can choose to report on multiple platforms while avoiding duplication by simple cross-referencing. Disclosures should be updated at least once a year, formally approved by the governing body and made publicly accessible (IoD, 2016).

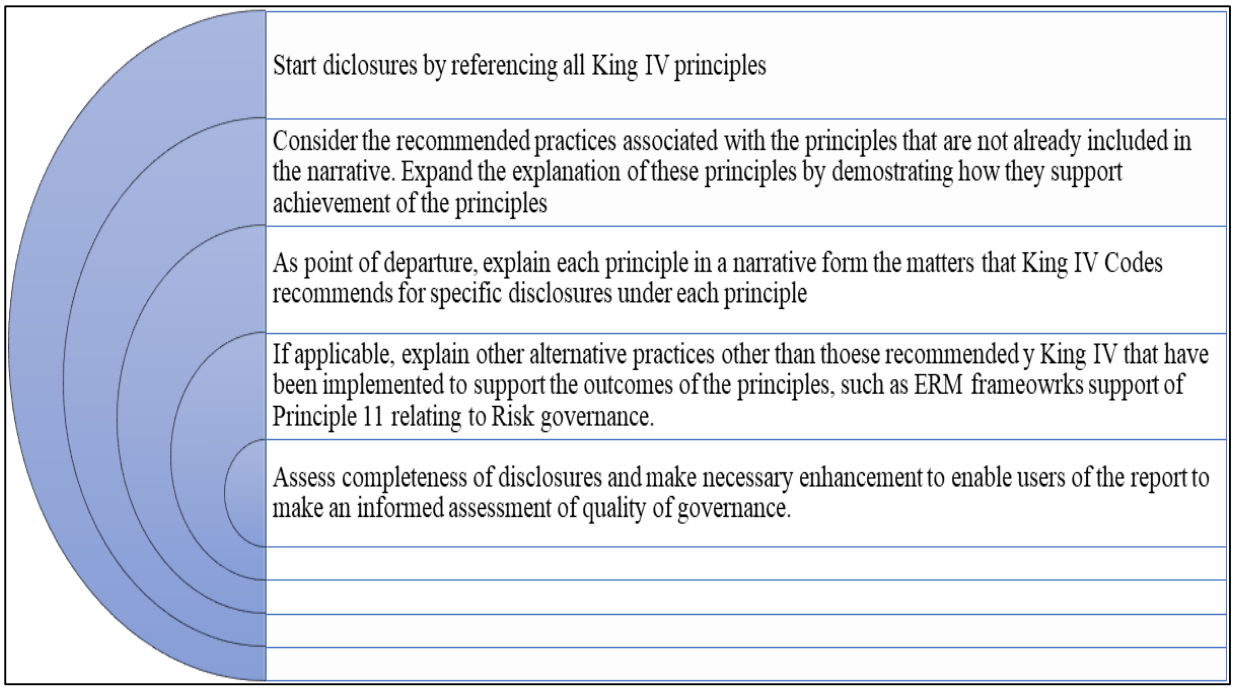


Figure 6: King IV disclosure roadmap (IoD, 2016)

Figure 6 above clearly demonstrates the completeness of disclosure in the annual report is of importance to ensure that the users of annual reports can make an informed decision on the

quality of governance of the organisation. It is significant to note that, even though King IV's disclosure roadmap provides guidance on the implementation of risk governance and recommended the assessment of completeness and quality of governance, it does not provide organisations with maturity measures nor a quality checklist (IoD, 2016; Wilkinson, 2014).

2.10.3 Risk management practices as recommended by King Codes

The King code on corporate governance provides guidelines for governance structures and operations for South African organisations. The report is issued by the King Committee on corporate governance as established by the Institution of Directors Southern African. The first King code was issued in 1994 and known as King I, accompanied by King II in 2002. As well, King III was issued in 2009 which introduced the "Apply or explain" concept. The concept required all organisations to apply the code's recommendations, if not, explain why the recommendation does not apply to the organisation as the codes were rule-based as compared to its predecessors, which were underpinned by the "Comply or Explain" (IoD, 2016).

This version was revised and issued on 01 April 2016, commonly known as King IV and introduced the "Apply and Explain" concept, outlining that all recommended practices applied should have detailed disclosures on the actual application and how they were applied/applicable in the organisation (IoD, 2016). Additionally, the newly issued code is outcome-focused compared to King III's rule base approach, which applies recommended principles that are outcome-oriented rather than enforcing rules of application. Consequently, this new concept meant that organisations had to disclose in detail their operational activities and governance initiatives to comply with the recommended practices of King IV (JSE, 2016; IoD, 2016).

King IV principles are not enforced or legislative. However, they are supported by the South African company laws, including the Companies Act of 2008. Regarding listed companies, compliance and disclosure of the recommended practices are further enforced by JSE listing requirements (JSE, 20160. In the higher education context, adoption and application of the recommended King IV principles are enforced by the Department of Education through the Higher Education Act's implementation manuals (DoE, 2016; RSA, 2016). King IV (2016) emphasises risk management as the crucial point of /and contribute to making decisions related to business strategy. It also points out that the governing body, known as the council in the education sector is assigned with the responsibility for effective risk management. This is confirmed by the COSO framework, which states that the board of directors must set the tone

at the top when it comes to risk management (COSO, 2016; Moloi, 2014). Therefore, even though King Codes do not have the legislative power to enforce adoption, application and disclosure, each organisation is enforced by its regulatory Acts and the South African Companies Act of 2008 to comply with the outcome-based recommended practice to achieve the outcomes that constitute good corporate governance (IoD, 2016).

Illustrated in Table 8 below are the King III practices which were later updated into the King IV recommended practices, King IV recommended practices are discussed in detail on the designs of the Checklist.

Table 8: Risk management practices as per the King code

Principles	Recommended practice
Risk governance Responsibility	The obligation to oversee risk in an organisation rests with the governing body. The King report recommends that the governing body should (IoD, 2009): • Develop a strategy and a plan for systems and processes of risk management. • Should express their opinion on the effectiveness of the system and process of risk management. • Define their responsibility for the risk management on the organisational charter • Integrate risk governance in their continuing training. • Once a year evaluation the execution of the risk management plan. • On ongoing bases, monitor the execution of risk management strategies. Furthermore, King IV (IoD, 2016), recommends an establishment of a risk commit allocated with the oversight role on risk governance, the roles, and responsibility of the Council should be clearly outlined. The Committee should

	adopt risk management strategies, receive assurance on risk management effective, and lastly integrate risk management in the day to day activities.
Risk Tolerance Level Determination	King recommends that the governing body needs to determine the level of risk acceptance and risk appetite yearly. Once the levels are determined, risk needs to be monitored and maintained within acceptable tolerance levels (IoD, 2016; IoD, 2009)).
Establishing a relevant Committee to assist the governing body.	A risk/Audit committee should be established to support the governing body in its responsibility to manage risks. The committee should: • Deliberate risk management strategy, plan and administer the risk management practices • It should comprise of executive and non-executive members. • Meet twice a year and consist of at least three members • Have its performance assessed by the governing body yearly (IoD, 2016; IoD, 2009). However, King IV further recommends that the committee should consist of executive and non-executive members, with the majority being non-executive (IoD, 2016)
Responsibilities Delegation to management **Risk Assessment**	Risk management strategies/Plan execution and monitoring should be delegated to management by the governing body. It is further recommended that: • Management should execute the risk strategy through risk management systems and processes.

	• It is the responsibility of management to integrate risk into the day to day operations. • The Chief Risk Officer (CRO) should possess the right knowledge and experience, and have access to management for strategic matters (IoD, 2009; IoD, 2016)
Risk Assessment	The governing body is responsible for ensuring that the risk assessments are conducted. To promote effective risk management, the King Report recommended that: • There should be a methodical, documented, and formal assessment on risk annually • Risk should be prioritised and ranked • The risk assessment should include risks that are affecting various revenue sources of the organisation, critical dependencies, sustainability, legitimate interests, and stakeholder expectations. • A top-down approach should be adopted by risk assessment • A risk register should be regularly received and reviewed (IoD, 2016; IoD, 2016).
Risk Response and Monitoring	It is recommended by King III that; the governing body should oversee that management develop and implement suitable risk responses and risk monitoring continuously. It is recommended that the following to be abiding by: • Management has to maintain a risk register and appropriate risk responses. • The governing body should be assured by management on the risk response's ability to improve the university's performance. • The risk management plan should stipulate the responsibility for the monitoring of risk.

	King IV (2016), highlighted that, the council should develop appropriate risk responses, and monitor the risk management practice effectiveness
Assurance and Disclosure on Risk	To promote proper risk assurance and disclosure, the governing body has a responsibility to ensure there are measures in place to support broad, relevant, accurate, and timely and also the availability of risk disclosure to the university stakeholders. It is further suggested that the governing body receives assurance with regards to the efficiency and effectiveness of risk management practices. In ensuring proper risk disclosures and assurance: • Management using assurance providers has to assure the governing body that the risk management plans are incorporated in the day to day operations. • Internal audit should assure the effectiveness of internal control and risk management practices

Source:(IoD, 2009; IoD, 2016)

These risk management practices act as a proxy for risk governance. Yet, adoption and application are subjected and influenced by factors such as the size of the organisation, the corporate governance maturity, resource availability, compliance and regulatory requirements. Just to mention a few. Also, the contingency theory on ERM practices outlined that, there are no universally accepted ERM processes as they are dependent on the factors stated above (Otley, 2016; Granlund & Lukka, 2017).

Risk management procedures and disclosures are a widely studied phenomenon. Even so, most prior studies have explored the phenomena in the business sector due to factors such as improved disclosures, mature overall corporate governance environment and JSE listing requirements. Due to the recent challenges faced by South African universities, there has been substantial attention to universities and risk management specifically (Moloi, 2015). In the South African context, risk management and governance disclosures are widely researched by

Takiso Moloi on numerous studies starting from 2010. In a study by Moloi (2010) directed at assessing the extent of corporate governance reporting by South African listed companies. The study assessed the 2006 annual reports of top 40 JSE listed companies for mandatory disclosures and the results revealed that the majority of the sampled companies complied with the practices with the section of the external auditor and whistle-blowing remaining the issue. Additionally, a study was conducted to measure corporate governance practices by South African HEIs. This study confirmed the notion that the majority of the HEIs provided disclosure as per King II requirements. Yet, there was a lack of detailed disclosure on the application. Hence, there was room for betterment in the disclosure statements (Moloi, *et al*, 2011).

In a similar study, which sampled mining companies and assessed risk management disclosure using the annual report for the year 2013. The study found that, although South African mining companies disclosed their risk governance process in line with corporate governance practices, their results confirmed those found in 2011 in the education sector as there were no clear details provided along with the actual risk management practices applied (Moloi, 2014).

From the studies above it is inferred that King III was used as the basis of measure through the "Apply or Explain" concept. Thus, detailed disclosure on the actual risk management practices was not required as long as the rule-based approach is complied with and a valid reason for non-compliance is provided to stakeholders (IoD, 2009). The 2014 study was extended to evaluate the actual risk disclosed by sampling listed South African mining companies using the Marikana incident as a trigger event. The study highlighted labour relations risk as top risk expected to be highly disclosed and rated higher in the risk register. Notwithstanding, it was not highly disclosed by the sampled companies. The non-compliance with labour relation results in industrial action coupled with operational disruption and financial losses. Hence, the lack of non-disclosure could result in the investor exposed to high-risk profiles outside their risk appetite or adversity their knowledge as they apply the integrated report to make decisions that did not have adequate disclosures to make an informed decision (Moloi, 2015).

As discussed in the literature, the King I report was issued in 1994, however, over the years the King Codes has introduced a new edition with the latest being King IV issued in 2016. As new King Codes are released, new empirical studies emerge as organisations are required to keep up with current best practices for governance (IoD, 2016).

Thus, a study was conducted to assess risk management of the top 20 listed companies in South African using King III and affirmed the previous findings, as it highlighted the lack of details on the actual practices applied (Moloi, 2015). Moreover, a cross-sectoral comparison study of risk management was conducted to assess the disclosures and the outcomes demonstrated that JSE listed companies applied the King Code due to the listing requirements and shareholders with highly invested interest. In regards to the National Government Departments and HEIs, there was, however, a lot of work to be done to embed risk management in the key activities and internal processes (Moloi, 2016).

In a similar study by Ntim et al., (2013) which assessed the extent of corporate governance and risk reporting disclosures pre and post 2007/2008 in the South African context. It was concluded that risk disclosures are mostly non-financial and qualitative. Also, there was a connection between corporate governance disclosures and board size, diversity and independence of the board. Perversely, there was a negative relationship between the extent of corporate governance and a dual board structure.

This is confirmed by several studies as outlined that; even though corporate governance recommends the formation of multiple governing structures. It is oftentimes associated with creating more layers of bureaucracy. Besides, having a separate risk committee is associated with high audit fees (Hines, *et al*., 2015). Hence, some organisations prefer an audit committee that handles both audit and risk issues. Contrary, another body of knowledge maintained that having a separate risk committee allows the audit committee to focus more on operational risk and the risk committee to focus on strategic risk (Ntim et al., 2013; Whyntie, 2013; Hines et al., 2015).

According to Jansen (2016), full adoption and disclosures are evolutional as they can be achieved over time and the status confirms the notion that risk management application and disclosures are dependent on various factors such as the size of the organisation, resource availability, governance maturity and commitment by management on ERM process (Otley, 2016; Granlund & Lukka, 2017).

Thus, risk management disclosure should improve over time as King Codes for governance and ERM frameworks are updated and new laws and regulations are introduced which enforce incorporation of the recommended practices and disclosure requirements.

2.11 GAP IN PRIOR STUDIES AND RESEARCH QUESTIONS.

Prior studies and theories discussed throughout the literature review section were reviewed, and the following gaps were identified:

The majority of risk management and disclosure studies are conducted in other countries outside South Africa. Thus, generalising the extent of risk disclosure in South Africa using their findings is questionable. Additionally, risk management studies conducted in the South African setting mostly explored the business sector. Consequently, the applicability of the findings to the educational sector is questionable as to the content for risk management and risk governance varies from industry to industry based on stakeholder expectations, compliance requirements, leadership and operational environment.

Moreover, prior studies on risk management disclosure and risk governance in the education sector were carried out before King IV issuance in 2016. Therefore, were based on the previous King Codes and focused on corporate governance as a whole with risk management only a portion of the disclosures. Moreover, some of these studies were dated having been conducted more than five years ago and highlighted the lack of detailed disclosures on the actual practices applied due to the previous King version not using the "Apply and Explain" concept. Before 2016 organisations were not required to explain how they applied the recommended risk management practices. Applying the findings of these studies to conclude on the adopted risk management practices and risk governance is questionable.

The questions that arise and remained unanswered

- What are the risk management practices that could be adopted and applied by South African universities as recommended by King IV for effective risk management?
- To what extent have South African universities applied, explain, and disclosed King IV's risk management recommended practices?
- What are the minimum risk governance statements that could be incorporated as a proxy for risk governance by South African universities?
- How risks are governed by South African universities and maturity thereof?

Thus, the study aims to fill the gap identified and addressing the above-mentioned questions.

2.12 CONCLUSION

This chapter aimed at reviewing prior studies on the adoption, application and disclosure of risk management practices and the risk governance maturity in the educational sector. The process began with a review of risk management theories, followed by risk governance and risk disclosure at a global and in the South African context. Furthermore, the chapter identified the gaps in the literature and research questions that were raised due to the gap identified. Most studies were carried on in other countries and the business sector. Prior studies that have been conducted in South Africa are either not in the educational sector or conducted before the introduction of King IV's "Apply and Explain" concept. Given the identified gap in the literature, the research questions were formulated. The researcher concluded that a study on risk management practices disclosure and risk governance maturity in the South African education sector given the recent challenges such as #Feesmustfall, would provide insights into better understanding risk management at HEIs in South Africa. Moreover, the introduction of King IV's "Apply and Explain" concept could result in increased disclosure in annual reports that can provide further insights in an attempt to fill the gap in the literature identified and address the research questions.

CHAPTER THREE (3)

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter aims to outline the design and methodology employed to answer the research questions:

1. What are the risk management practices that could be adopted and applied by South African universities as recommended by King IV for effective risk management?
2. To what extent have South African universities applied, explained and disclosed the King's recommended practices?
3. What are the minimum risk governance statements that could be incorporated as a proxy for risk governance by South African universities?
4. How risks are governed by South African universities and risk governance maturity thereof?

To address the above-mentioned research questions, the study was conducted in two phases:
Phase one- Prior studies, ERM framework, risk governance frameworks and King codes were reviewed to establish the risk management practices and the minimum governance requirements which could act as a proxy for risk governance.
Phase two- A checklist was deployed to conduct a qualitative content analysis of the annual reports.
This chapter proceeds with the justification of the methodologies and designs employed.

3.2 RESEARCH METHODOLOGY AND DESIGN

This study used a qualitative approach as it aimed to conclude on the extent to which risk management practices recommended by King IV are adopted, applied and disclosed by South African universities. As well as, how risks are governed and risk governance maturity thereof, using annual reports which are qualitative in nature. King IV recommends a qualitative narrative on the application of the practices for effective risk management (IoD, 2016). Established in the study by Creswell (2014), a study can investigate in the form of qualitative, quantitative and mixed-method. The quantitative approach answers the research question using numerical measurements, whereas qualitative seek understanding of a phenomenon using non-numerical measurements and mixed research use a mix of both approaches to address the research question. Hence, a qualitative approach was chosen to collect data and achieve the

objective of this study, as it aims to comprehend the detailed disclosures as previous studies highlighted a lack of disclosures on the actual application.

Deductive reasoning was adopted as the main logical reason. Accordingly, an in-depth literature review was conducted, and the review of King IV, Higher Education Act and Implementation guidelines, where the researcher formulated a perception. The perception was translated into a problem statement. In turn, this perception was tested through empirical research; encompassing the collection of qualitative information to address the research problem by answering the research question

A deductive approach can be defined as the development of a hypothesis based on existing theory and use such a theory to develop a research strategy (Wilson, 2010). In the case of this study, the existing theory is the recommended practices by King IV which act as the framework for corporate governance including risk management. Thus, the researcher was guided by these principles to develop the disclosure checklist and measure against the content disclosed in the annual report to determine how the minimum risk governance requirements are incorporated by South African universities.

This study adopted an exploratory research design which is likewise known as formulating. According to Bhattacharyya (2010), this research design approach aims at articulating a problem for a hypothesis or a specific idea through establishing and assessing an incident in a new light. Exploratory research is conducted when the study aims to get new insights, ask new questions and assess topics for discoveries. This study aims to explore the extent of disclosure and understand how risks are governed in the South African education sector, discover new insights and trends in the risk management context, risk disclosures and risk governance. Hence, an exploratory design was chosen. Research designs can consist of experimental, casework, action research survey and archival research strategies (Saunders & Lewis, 2012). An archival research strategy is adopted as documents such as annual reports are the primary source of data for the study.

Research philosophies can be defined as ideologies that outline rules on how research can be directed. For this study, a constructivist paradigm was employed to address the research questions. Constructivist argues that we cannot separate the reality with human perception as, the reality is dependent on human perception (Burns & Burns, 2008). Constructivist concludes

that analysis can help a researcher acquire knowledge of the study using a qualitative approach and the study analysed annual reports which are qualitative in nature.

According to Myers (2008), constructivist emphasises the importance of meaning and work on the assumption that reality, even if given or socially constructed, is dependent on social construction such as instruments, language and shared meaning.

When it comes to research design strategies that consider time dimension, there are cross-sectional and longitude designs. A cross-sectional design was selected for this particular study to study risk management practices, risk disclosure and risk governance at a point in time, which is the year 2017 as the year after King IV issuance and the first reporting period given King IV effectiveness (Andersen & Terp, 2006).

3.3 THE RESEARCH INSTRUMENT

The risk disclosure Checklist was employed for this study for several reasons: firstly, it is less expensive and allows the researcher to assess qualitatively without expensive software. Secondly, it allows the researcher to assess the completeness of content compared to a pre-defined set of disclosure statements (Moloi, 2011).

3.3.1 Checklist 1-Disclosures

The checklist is one of the important tools of the study as it was used to explore the extent to which King IV's recommended risk management practices were applied and explained in the annual report and compliance with the principles thereof. The researcher developed a Checklist based on King IV principles 11 and its recommended practices for effective risk governance to determine if each annual report carried Fully Disclosure, Non-disclosure, or Obscurely. The Checklist was divided into two sectors known as; Risk governance structure and Risk management practices. The risk governance structure comprising of practices regarding the formation of the risk governance structure. As well, the risk management section consisting of the actual risk management practices. The checklist entails two stages of testing:

a) *Stage one*- known as Risk disclosure, and consist of Yes, No and Obscurely, it was used to explore the extent of disclosure by assessing, if the risk management practices recommended by King IV have been Fully disclosed, Non-disclosure or Obscurely disclosed in the annual report of HEIs.
b) *Stage two* -Known as King IV application, consists of Yes, No and Partial. While assessing the extent of disclosure in *stage one*. *Stage two*, concurrently, assessed if the

disclosed risk management practices have been applied "Yes" not applied "No" and certain risk management practices not fully applied "Partial".

The thought process and considerations in selecting King IV and developing the checking list was supported by the following:

- The King code acts as a governance framework in South Africa and recommends best practices that an organisation should adopt for good governance.
- King IV provided risk management practices through principle 11, which were recommended for organisations to apply for good governance and effective risk management in the risk governance context.
- King IV is underpinned with the concept of "Apply and Explain" compared to King III, which had the "Apply or Explain" Concept. Consequently, as a point of departure, organisations should explain how they have applied the recommended practices, which should address the issue highlighted by prior studies on the lack of detailed disclosures on the actual practices applied.
- The explanation can be disclosed in different reports such as sustainability report, ethical report, or online as decided by the management and should be updated annually and made accessible to the public, these disclosures usually take place in the annual report.

The above narrative concept is qualitative as it required organisations to substantiate a claim that good governance is practiced. This can be achieved by providing complete information for users of annual reports to make an informed decision (IoD, 2016; PWC, 2016; Moloi, 2016). Using the above as guidelines, universities are recommended by King IV and required by the Higher Education Act of 1997 as discussed in the literature, to apply the recommended practices for risk governance. Additionally, universities are required to explicate how they have applied the recommended practices and such a narrative should be disclosed in the annual report and made publicly accessible. Thus, the researcher developed a Checklist guided by King IV recommended practices and to access the extent of disclosure in the annual reports. Moreover, King IV is used as a guide due to the "Apply and Explain" approach which provides for good qualitative disclosure and detailed explanations in the annual reports (IoD, 2016).

Table 9: Checklist developed as the measuring instrument

			DISCLOSURES			KING IV APPLICATION		
No	Category	King IV recommended practices	Yes	No	Obscurely	Yes	No	Partial
1.1	Risk Governance structure	The Council should consider allocating the oversight role of risk governance to a dedicated committee, or adding it to the responsibilities of another committee such as audit committee						
1.2	Risk Governance structure	If the audit and risk committees are separate, the Council should consider one or more members to be member of both committees for more effective functioning						
1.3	Risk Governance structure	The committee for risk management should have executive and non-executive members, with majority being non-executive members						
2.1	Risk Management Practices	The Council should assume the responsibility to govern risk or through a dedicated committee by setting direction for how risk should be approached and addressed in the university, including the following :The potential positives and negatives effects of the risk in achievement of objectives.						
2.2	Risk Management Practices	The Council should treat risk as integral to the way it makes decisions and execute its duties						
2.3	Risk Management Practices	The Council should approve policies that articulates and gives effects to its set direction on risk						
2.4	Risk Management Practices	The Council should evaluate and agree on the nature and extent of risks that the organization is willing to take in pursuit of its strategic objectives, such as: Should approve the universities' risk appetite and risk tolerance						
2.5	Risk Management Practices	The Council should delegate to management the responsibility to implement and execute effective risk management						
2.6	Risk Management Practices	The Council should exercise ongoing oversight of risk management to ensure the following: 1. An assessment of risks and opportunities 2. An assessment of opportunities presented by risks. 3. The design and implementation of appropriate risk responses 4. The establishment and implementation of business continuity arrangement 5. The integration and embedding of risk management in the business activities and culture of the university.						
2.7	Risk Management Practices	In addition , the following should be disclosed in relation to risk: 1. An overview of the arrangement for governing and managing risks 2. Key areas of focus during the reporting period, induding objectives, the key risk facing the university, as well unexpected or unusual risk and risk taken outside the risk tolerance levels 3. Actions taken to monitor the effectiveness of risk management and how outcomes were addressed						
2.8	Risk Management Practices	The Council should consider the need to receive periodic assurance on the effectiveness of risk management.						

3.3.2 Checklist 2- Risk governance

The second purpose of the study was to establish the minimum risk governance requirement and assess the risk governance maturity. Arguably, the application of King IV is dependent on several factors such as the size of the organisation, resource availability, the extent and complexity of business activities (IoD, 2016). Some organisations, based on lack of resources

and time may proportionally apply the recommended practices. For instance, where it is recommended that a certain function be established such as a risk committee, such function could be just an appointment of a risk practitioner or outsourcing of such function (IoD, 2016; Moloi, 2015). Consequently, for the study to explore how risks are governed by the South African university, minimum risk governance requirements were identified based on King IV's recommended practices, literature and the risk governance framework discussed.

Revisiting the literature in Section 2.7-Risk governance, which demonstrated that risk committee nor risk officer, risk culture and risk appetite are the most important components of risk governance. Further confirmed by the PWC risk governance guidelines as discussed in Section 2.7, which highlighted the structure in which risk governance operates in, the approach that is taken to conduct risk governance which are the processes and the guidelines for sound decision-making through risk appetite parameters as the most important aspects for risk governance. Moreover, Principle 11 of King IV on risk governance recommends that the council should govern risk in a manner that supports the achievement of strategic decisions (IoD, 2016). Therefore, to achieve desired outcomes as per the recommendation, an organisation need to establish a structure that allows for risk governance and creates a culture that acknowledges the importance of risk management. Additionally, risk governance structure allows for the identification of responsibilities, accountabilities and delegation of authorities (PWC, 2015).

Once the structure is in place with the relevant knowledge, skills and experience, the next step would be to establish the basics such as systems and processes that support risk governance. To ensure operational and strategic decisions are taken within a predetermined acceptable level. The organisation needs to establish a risk appetite and monitor that decisions are taken within acceptable tolerance levels (COSO, 2017; Moloi, 2016; IoD, 2016). The question that then remains, how does an organisation know when it has implemented adequate risk governance as implementation is dependent on the size of the organisation and availability of resources for execution.

That is where risk governance maturity operationalised. As organisations need to assess risk management efforts against criteria set by the risk governance maturity framework using attributes such as structure, processes and monitoring as discussed in Section 2.8. Together with the different levels of maturity, to understand further actions as per the maturity competency drivers an organisation needs to incorporate for risk governance to mature. When

an organisation is carrying a continuous evaluation of their risk governance, it creates room for risk management awareness to improve the risk culture so that risk can be part of decision-making and an integral part of the day to day activities (PWC, 2016; Rehman & Hashim, 2018).

A second Checklist was created utilising the identified minimum risk governance requirements guided by the literature, King IV and the multilevel risk governance framework. The aim was to assess if the risk governance minimum requirements have been incorporated into the risk management practices of the sampled universities and categories the practices into levels of maturity, to determine the extent of risk governance maturity thereof. Notably, King IV does not provide for risk maturity attributes and modes or levels of maturity. Hence, the researcher decided to supplement with an ERM maturity framework to group the recommended practices and minimum risk governance requirements into levels of maturity

The following modes/levels of maturity were adopted as per the Association for Federal Enterprise risk management (2016) and incorporated into the checklist to ensure that the minimum risk governance requirements are assessed within the pre-defined levels

a) *Level 1-Nascent*: initial states of risk management
b) *Level 2- Emerging*: basic processes are in place, however, the organisation not ready for disruptions
c) *Level* 3-Integrated: established risk management structures and processes, the risk is integrated into daily activities and business continuity plans are in place
d) *Level 4-Predictive*: beyond mature, risk quantifications is taking place and the organisation is ready for disruptions
e) *Level 5-Advanced*: the risk is embedded in decision-making, the strategy and capital allocation.

Full demonstration and explanation of each level can be found in the literature Section 2.8. Having established the levels of maturity, the researcher developed the minimum risk governance requirements per maturity level guided by King IV recommended practices, risk maturity framework discussed in the literature and the different aspect of risk maturity attributes such as structure, roles and responsibilities, systems and processes, risk culture and oversight.

These minimum risks governance requirements aim to understand risk governance implementation/ environment and how mature are the universities' risk governance using the different maturity levels as illustrated in table 10.

Table 10: Risk governance minimum requirements

NO	Levels of Maturity	Risk Governance minimum requirement per level	Minimum requirements Incorporated	
			Yes	No
5.1	Level 5-Advanced	Risk are embedded strategic planning, capital allocation and in daily decision making		
5.2	Level 5-Advanced	Key risk indicator are established		
5.3	Level 5-Advanced	Risk are linked are linked to the strategic objectives		
5.4	Level 5-Advanced	Risk root causes analysis is conducted		
5.5	Level 5-Advanced	Risk management practices are monitored and areas of improvement are identified and improvement are implemented		
5.6	Level 5-Advanced	Business continuity is developed, tested and lesson learnt are recorded and improved for effectiveness.		
4.1	Level 4-Predictive	Risk management is embedded in the university as whole.		
4.2	Level 4-Predictive	Single view of risk across the organization and risk management processes are institutionalized		
4.3	Level 4-Predictive	All Business units drive implementation through risk owners/Risk Champions		
4.4	Level 4-Predictive	Business continuity is established and implemented, testing and exercises are conducted using recovery strategies.		
4.5	Level 4-Predictive	Risk are assessed and quantified periodically		
4.6	Level 4-Predictive	Unexpected or unusual risk and risk taken outside the risk tolerance levels are identified and monitored		
3.1	Level 3- Integrated	There is committee delegated with the responsibility to govern risk		
3.2	Level 3- Integrated	ERM program is endorsed by the Council		
3.3	Level 3- Integrated	Roles and responsibilities are well defined for accountability		
3.4	Level 3- Integrated	Risk Management is integral part of day to day activities		
3.5	Level 3- Integrated	Training on risk management is conducted		
3.6	Level 3- Integrated	Council approved policies that articulates and gives effects to its set direction on risk		
3.7	Level 3- Integrated	Risk appetite and tolerance level are defined and approved by the Council		
3.8	Level 3- Integrated	An assessment of risks and opportunities are conducted		
3.9	Level 3- Integrated	An assessment of opportunities presented by risks is conducted		
3.1		Appropriate risk responses are designed and implemented		
3.11	Level 3- Integrated	Cost vs. Benefit is considered for all risk response strategies		
3.12	Level 3- Integrated	Business Continuity is established and implemented		
3.13	Level 3- Integrated	Risk management is integrated in the business activities and culture of the university		
3.14	Level 3- Integrated	There is a monitoring and assurance on risk management practices		
3.15	Level 3- Integrated	Reporting on risk management take place		
2.1	Level 2- Emerging	Basic ERM Processes are in place		
2.2	Level 2- Emerging	The Council has allocated oversight role for risk governance to Committee or risk practitioner		
2.3	Level 2- Emerging	Resources are made available for risk management		
2.4	Level 2- Emerging	Risk are identified and assessed		
2.5	Level 2- Emerging	There is a business continuity Plan in place		
1.1	Level 1-Nascent	There is no structure for risk management		
1.2	Level 1-Nascent	There is no commitment by management to ERM		
1.3	Level 1-Nascent	Risk are address as they come without anticipation of potential risks		

3.4 THE USEFULNESS OF ANNUAL REPORTS

Organisations communicate with stakeholders using various forms such as media releases, websites, newsletters and annual reports. For corporate governance disclosure, King IV recommends annual reporting, particularly for listed companies. Nevertheless, South African universities, unlike private companies are required by the Higher Education Act No 101 of 1997 to produce and submit an annual report to the Department of Education using the guidelines for annual reporting by public HEIs (National Treasury Republic of South Africa, 2010; RSA, Moloi, 2016). It is of uttermost importance that, these annual reports contain adequate and useful information about the operations of the institution including risk management practices and risk governance. According to the International Accounting Standards Board (IASB) Framework (IASB 2007), "the objectives of an annual report is to timely deliver important data about performance, financial position and the decisions taken that affect strategic objective". The framework highlighted that, for the information contained in the annual report to be useful and adequate, it must be understandable, relevant, reliable and comparable.

The above qualitative characteristics formed the basis of the assumption of the study as the Checklist assessed universities' annual reports to understand risk management practices and governance. Therefore, the university must have disclosed information that can be understood, relevant to the subject, can be relied upon as the truth practices taking place at the university. Moreover, the information should be comparable among all institutions. These characteristics were important as the study conducted a content analysis to understand the risk management disclosure as per King IV (IoD, 2016). Justification of this method is discussed infra in Section 3.5.

3.5 RESEARCH DESIGN- CONTENT ANALYSIS

Content analysis can be described as "an exploration strategy for making replicable and valid interference from data to their contexts, from analysing the sender, the message and the impact generated by the message" (Krippendorff, 2018; Moloi, 2016). Thus, stability, reproducibility, and accuracy are the components that support the coding of information for this methodology and allows for the analysis of documents (Mouton 2005). Many authors alluded that "content" are words, symbols and meanings.

In a study by Prasad (2008), content analysis is defined as "a systematic exploration of content to create a methodical reference and interference in the context, meanings, and objectives within a message, text, audio and other sorts of communication, while allowing validity and replication". Amy Luo (2019), highlighted that content analysis "is a research method used to distinguish patterns in a form of communication through a systematic collection of data from a text which can be written, oral or visual". Moloi (2009) outlined that, content analysis as a research method is not limited to textual analysis, as it can also apply to coding drawings and videotapes. Contrary to the views of Stemler (2001) as opposed that this technique can only be applied to data that is durable to allow for replication.

Thus, it can be concluded that content analysis should explore the content contained in the form of communication, in a manner that is valid and can be replicated in further studies. Content analysis can be quantitative, which is focused on counting and measuring of the appearance or mention of words in a predetermined rule. As well as qualitative, which focuses more on interpretation and discernment of a hypothesis that is already known. Both types require the categorisation of words, concepts and subjects within the text (Amy, 2019). Besides, content analysis is a widely used methodology by researchers around the globe, especially for measuring corporate disclosure. To refer a few. It was used by Musa Uba Adam (2019) on a study titled: *Risk Reporting: A survey of risk disclosure in the annual report of listed companies in Nigeria*. It can as well be traced outside the African continent to Canada by Maingot, Quon and Zaghal (2020) whose study is titled: *The disclosure of ERM information: an overview of Canadian regulations for risk disclosure*.

In the South African context, it is widely employed among other researchers by Moloi (2016) to measure corporate governance reporting by South African listed companies. As well as disclosure analysis by South African universities using King III principles in 2015 and beyond, using the annual report as a form of a data source. In addition, Marike (2016) conducted a qualitative content analysis, assessing the influence of risk governance and disclosure in integrated reporting to risk management over three years. The study used a risk maturity framework to create a disclosure index and the annual reports were assessed quantitatively through content analysis to weigh the contribution and relationships between the variables thereof.

Hence, it was interesting to further explore the risk management phenomenon together with risk disclosure and risk governance maturity using King IV with the "Apply and Explain" approach which promotes disclosures for compliance. Likewise, after the #Feesmustfall movement the risk environment, exposure and risk universe of South African universities was utterly shifted, threatening their strategic objectives as confronted with emerging risk (Moloi, 2016).

For this study, a qualitative approach was used as the research intended to analyse the annual reports and assess disclosure statements using the deductive reasoning approach, as the theory of risk management practices and risk governance is already existing and categorised using the developed Checklist. This is achieved by applying the Checklist and comprehending the disclosures as outlined by constructive philosophises, rather than counting words. Furthermore, qualitative content analyses allowed the researcher to comprehend if the disclosures were made or not and understand if the recommended risk governance statements have been incorporated or not.

3.5.1 Qualitative research approach

A quality method to a qualitative study is not new and has been widely researched to build the foundation of trustworthiness for methodological integrity (Levitt *et al*., 2017). Levitt *et al*. (2017) asserted that the quality approach should not be confined to a set of measures, but rather a context-driven way of thinking about systematic integrity, where the research objectives and the researcher's views are supported by a thought process and reasoning. Context and meaning are one of the central characteristics of the qualitative method (Roller & Lavrakas, 2015). Content analysis also possesses characteristics such as subjectivity and qualitative data. One important distinction of content analysis, when compared with other research methods is the connection between the scholar and the participants. Other methods, the relationship between the researcher and the participants are of the utmost importance for data collection and the integrity of the data. While, with content analysis, the researcher works with text, images, and graphics, etc (Roller, 2019). Hence, there is a potential for bias in the coding of data which could jeopardise the integrity of the content.

To address the above, the study applied quality strategies to ensure the trustworthiness of the study through credibility, confirmability and applicability.

3.5.1 .1 Credibility

Credibility in a qualitative study relates to the data collection phase of the study, including scope which relates to coverage, sampling, sample size nor of analysis units as well as data gathering process. To ensure credibility the researcher adopted well-recognised research methods to ensure sufficient coverage and sampling approach. A thick description of the phenomenon the research aims to explore has been well-defined and the thought process on how data collection tools were developed has been explained intensively in the research methodology to ensure transparency. Lastly, previous studies, frameworks and King IV guided in developing the approach of the study to ensure trustworthiness.

The study employed data credibility by not only collecting data for the period under review, but rather adding two additional years for comparison and consistency in the data collection and analysis.

3.5.1 .2 Confirmability

Confirmability relates to a degree of neutrality in the research findings. This means that the findings pertain to the actual context analysed not any potential bias or personal motivation of the researcher (Roller, 2019). The researcher recognises that multiple realities exist, personal views and experiences may result in methodological biases. Even so, the study ensured a clear and accurate representation of the content analysed in the annual reports. This was accomplished by maintaining a decision trail through transparency in a step by step approach followed. The researcher provided background information, in-depth methodological description and detailed analysis of the phenomenon in question to allow for independent comparison, scrutiny and repetition by other researchers when necessary.

3.5.1 .3 Applicability

Applicability relates to how qualitative findings of the study apply to other contexts, similar situations, similar populations and similar phenomena. The trustworthiness of the study was established by providing in-depth background data and methodical description to allow future studies to determine applicability and replication to another setting. Interpretations and recommendations are confirmed by the methodological support or reject the current and

emerging of new hypotheses and insights for future studies. Thus, the findings are compared with the existing body of knowledge and provide insights into potential areas of study.

3.5.2 Sampling procedures

3.5.2.1 *Population*

According to Welman et al (2005) "population is the entire group of all factors of study about which the researcher desires to make specific conclusions". Currently, South Africa has twelve (12) traditional universities, six (6) comprehensive universities and eight (8) universities of technology, excluding FET colleges, TVET colleges, private colleges and private universities distributed among all nine provinces. Arguably, all universities are subject to risk, given the recent challenges and should adopt risk management practices to manage the risk as required by the Higher Education Act. Consequently, they can all be targeted population, especially those who have produced and publish their annual report annually for the period under review, which is 2015 to 2017, rendering the population unknown. The population of the research includes the South African publicly funded universities. There are 26 public universities in South Africa, excluding private universities FET and TVET colleges. These universities are required by the Higher Education Act No 101 of 1997 to produce an annual report every year, which makes the population vast over a period of 3 years as each university would have produced three annual reports.

3.5.2.2 *Sampling method and sample size*

Purposive sampling has been employed for the study. Maree (2007) stated that "a purposive sampling is a methodology of sampling that is used in distinct circumstances in which the sampling is prepared with a particular purpose in mind". This study's qualitative sample was purposive rather than random as the researcher uses his/ her judgment for selection (Sander & Lewis, 2012). Therefore, purposive sampling allows the researcher to be subjective/selective in determining the participants based on the needs of the study and the characteristics of the participants.

Maduekwe et al., (2016), expresses a sample as the "small form of the population, which is demonstrative or a model of the population". So, this research study sampled 18 universities from the population mentioned in gathering the required data. For the study, the sample was only limited to traditional universities, comprehensive universities and universities of

technology over three years between 2015 and 2017. Hence, two universities per category were selected and each university's annual report was analysed over three years for comparison, trends and insights.

Therefore, the sample size is 18 annual reports and six reports per year. This sample was deemed sufficient and the data employed a triangulation by not simply collecting data for the year under review, rather added two more years for comparison and consistency. Data collection and sampling ensured traditional, comprehensive and universities of technology are represented evenly for generalisation of results and sufficient coverage.

Moreover, due to the nature of content analyses being labour-intensive and consist of reports, which the researcher needs to first go through a phase of familiarisation with the content. Secondly, the content had to be read for understanding and analysed in such a manner that the same conclusion can be replicated by other researchers. Other criteria of selection included an annual report being published for the period under review. Consequently, an annual report that is not in the public domain was not analysed for ethical consideration. Lastly. Prior studies, that employed qualitative content analysis usually use a case study and intensively assess the organisation for comprehension, rather than a larger sample.

The study tests these variables from the year 2015, which is the year the trigger event #Feesmustfall started and aims to understand the risk environment at these institutions. The study extended to 2016 and 2017 for comparison, new insights and trends. The year 2016 was chosen as due to the King IV issuance, which was an improvement of King III. Lastly, the years 2017 was selected as an aftermath year, to understand these variables after an improved recommended practice as the universities may only have started a full application and reporting on King IV recommended practices in 2017. Also as outlined that, King IV introduced the "Apply and Explain "concept, which required organisations to apply all recommended practices and give detailed disclosures on the application, compared to King III, which stated that organisation should comply with the practices or explain when the principle is not applicable as it was rule-based (IoD, 2016). This new approach meant that organisations had to disclose in their annual report, how they have applied King IV recommended practices and requiring detailed disclosure and improving on disclosure requirement.

3.5.3 Data collection

The annual reports for the years 2015 to 2017 of all sampled universities were downloaded from the official websites to collect data for the study. "The annual reports are readily available secondary data, prepared for prior years of analysing and reporting purposes" (Zikmund et al, 2010). Each annual report was analysed using the developed Checklists.

3.5.4 Unit of analysis

Blumberg et al (2008) distinguish amongst five units of analysis, which consist of conjoint ranging from individuals, organisations, departments and divisions. This study focused on South African universities as it aimed to understand the phenomena of risk management practices in the education sector. So, the units of analysis were universities.

3.5.5 Analysis approach

To ensure the adaptability of the results, the data analysis process was documented using excel and the records are kept. When the content analysis was conducted a formal approach was employed for replication and as follows:

Phase 1: getting accustomed to the annual risk reports section by conducting an in-depth reading of the report and highlight relevant disclosures.

Phase 2: the second phase consisted of a comprehensive reading of the report and answering the checklist governance statements. The disclosure statements were then recorded on the excel spreadsheet on the relevant King IV recommended practices nor minimum risk governance requirements.

Phase 3: evaluating completeness and accuracy by read-through across the years to confirm details. Once accuracy was confirmed the data was then analysed using excel and reported in aggregate.

Phase 4: results and visualisation, comparison, insights, generating and comparison with literature to confirm or reject trends.

3.8 ETHICAL CONSIDERATIONS

Although the study used secondary data, approval was acquired from the Faculty of Business and Management Science, Ethics Committee of the Cape Peninsula University of Technology. Also, for ethical issues and organisational reputation damage. Even though the sampled universities are specified, the results are presented as aggregated and not the actual results for each specific university.

3.9 CONCLUSIONS

This chapter aimed to describe the research methodologies used to collect the data required to address the objectives of this study. The chapter started by outlining the research methodology and designs employed, discussed the research instruments employed by the researcher and the data analysis process. Lastly, the ethical considerations of the study were discussed. The following chapter provides the presentation, analysis and discussion of the results of the content analysis conducted for the disclosures of risk management practices within the universities.

CHAPTER FOUR (4)

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

4.1 INTRODUCTION

The overview of the methods and the research procedures utilised in this study were provided and explained in the previous chapter 3. The sample selection as well as the development of the analyses that were employed were described in detail to provide cogent understanding of the utilised techniques. The processes entailed in collecting, capturing, processing and analysing data were also provided and the qualitative measures applied in the study to confirm the reliability and validity of the research tools were clearly stated.

The purpose of this current chapter is to present, analyse and discuss the results of the content analysis conducted using a Checklist to investigate the adoption and disclosure of risk management practices recommended by King IV and risk governance maturity by South African universities.

4.2 ASSESSED ANNUAL REPORTS

Referable to the discussed limitation such as; the lack of a comprehensive list of all HEIs which are public-funded and published their annual report for the years 2015 to 2017. The time constraints of the study, the methods employed as the qualitative content analysis is considered labour-intensive as the researcher goes through a process of analysing to comprehend the disclosure. Thus, most studies that utilised the method usually conducted a case study as the researcher conduct analysis of reports. So, two universities per category were selected and three annual reports per university for the period under review were analysed, resulting in six annual reports per year and 18 annual reports in total over three years.

The sample size was deemed sufficient as all the university categories are presented evenly. Moreover, the study employed data triangulation by not only collecting data for the year under review, rather added two more years for comparison and data collection consistency as discussed in Chapter 3. The reporting year is 2017, with 2015 being used as the year the trigger events started and 2016 is the year in which King IV was issued. The earlier years are used for comparison purposes and trend analysis.

Table 11 Assessed Annual reports by category

Categories	Number of annual reports assessed		
	2015	**2016**	**2017**
Traditional universities	2	2	2
Comprehensive universities	2	2	2
Universities of technology	2	2	2
TOTAL	**6**	**6**	**6**

4.3 RISK MANAGEMENT PRACTICES

Checklist 1 was created comprising of two sections namely; Risk governance structure and Risk management practices. The two Sections consist of risk management practice disclosures as recommended by King IV for good governance.

The Checklist was supported by King IV's "Apply and Explain**"** concept requiring universities to apply the recommended practices for effective risk management and provide a detailed explanation of how they have applied the practices using disclosures in the annual reports (IoD, 2016). Consequently, the Checklist was used to assess the extent of risk management practices disclosure by South African universities. To accomplish this, three extents of disclosures were created, namely; Full Disclosure, Non-Disclosure and Obscurely Disclosure. The researcher then conducted a content analysis of the annual reports to assess, if the risk management practice disclosure statement on the sampled university has Fully Disclosures, Non-disclosure, or Obscurely Disclosures. Universities with Full Disclosure were marked as YES. Universities that did not make any disclosures on specific practices were marked as NO, while universities that did not disclose in detail were marked as OBSCURELY. Lastly, all sampled universities with Full Disclosures were added together and presented as a percentage of YES, the same applied with NO and OBSCURELY respectively**.**

Presented below are the results of the risk management practice disclosures by South African universities. The results are presented in the two Sections of the Checklist known as Risk governance structure and Risk Management Practices.

4.3.1 Risk governance disclosures

Presented in Figure 7 are the risk governance structural section of the Checklist which assesses the extent of disclosures relating to the formation of the risk governance structure.

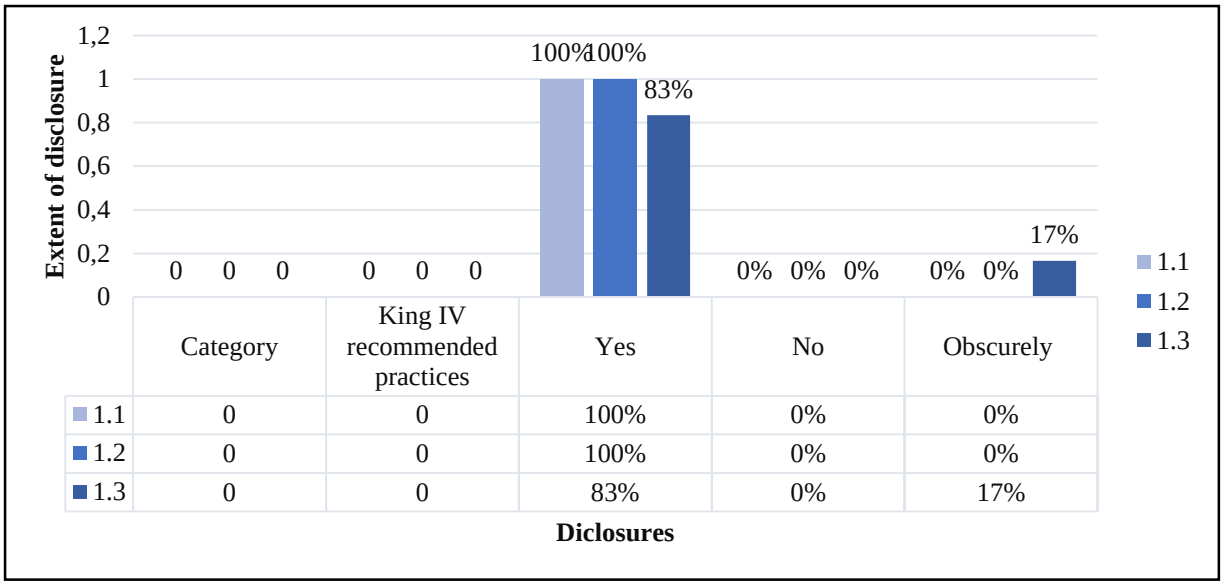


Figure 7 : Risk governance structure 2017 disclosure

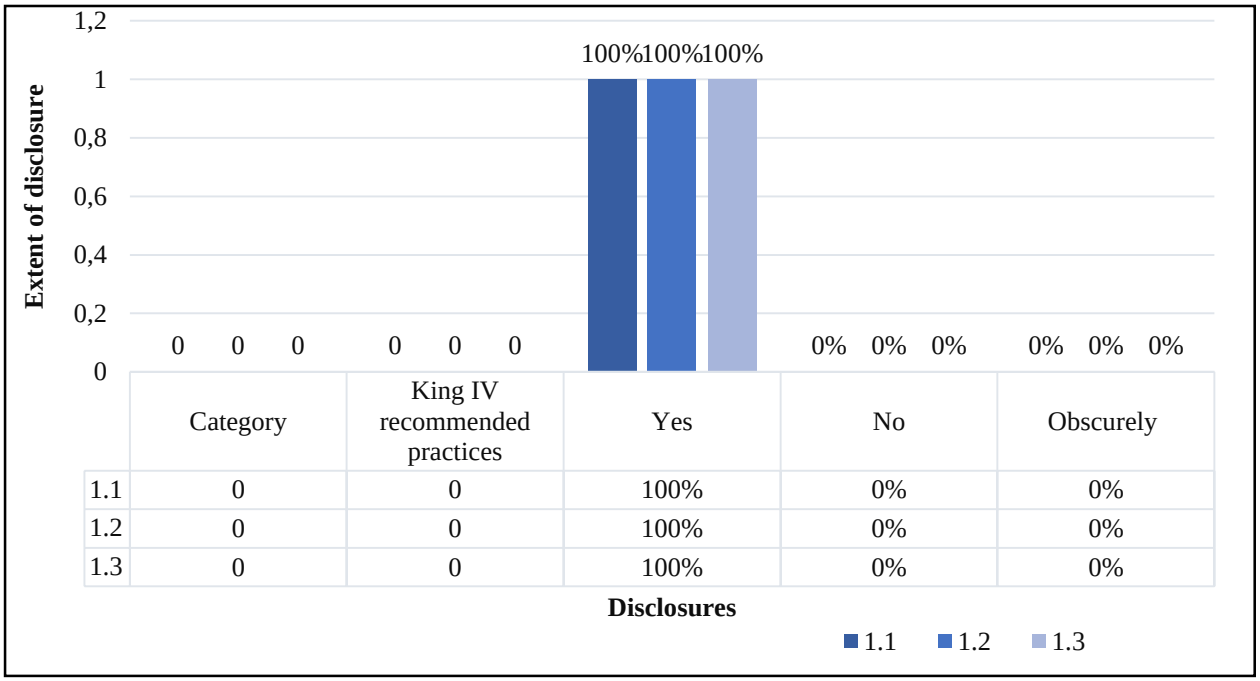
The results presented in Figure 7 above were further outlined in Table 12 for a detailed explanatory presentation of the actual risk governance structures.

Table 12: Risk governance structure 2017 disclosures

			Disclosures		
No	**Category**	**King IV recommended practices**	**Yes**	**No**	**Obscurely**
1.1	**Risk Governance structure**	The Council should consider allocating the oversight role of risk governance to a dedicated committee or adding it to the responsibilities of another committee such as the audit committee	100%	0%	0%
1.2	**Risk Governance structure**	If the audit and risk committees are separate, the Council should consider one or more members to be a member of both committees for more effective functioning	100%	0%	0%
1.3	**Risk Governance structure**	The committee for risk management should have executive and non-executive members, with the majority being non-executive members	83%	0%	17%

Figure 7 and Table 12 reflect the extent of disclosures by South African universities regarding risk governance structure as per King IV's recommended practices. All sampled universities (100%) in 2017 fully disclosed their risk governance structure, except for information relating to No 1.3 to the formation of the risk committee as 83% of the sampled universities disclosed fully and the remaining 17% obscurely disclosed. These universities mentioned their risk governance committee members. However, they did not distinguish if they are executed (Internal) or non-executive (external). This was a diminution in the number of universities that fully disclosed information related to risk governance structure as 100% of sampled universities disclosed fully in 2015 and 2016 as reflected in Figure 8 and Figure 9 below, which reflect on 2015 and 2016 disclosures as comparison years.

From above, it can be concluded that South African universities fully disclosed information regarding their Risk governance structure and formation as of 2017, given all the recommended practices were disclosed by over 80 % of the sampled universities.



Category	King IV recommended practices	Yes	No	Obscurely
1.1	0	0	100%	0%	0%
1.2	0	0	100%	0%	0%
1.3	0	0	100%	0%	0%

Figure 8 Risk governance structure 2015 disclosure

Figure 8 above presents the risk governance structure disclosures for the years 2015 which is used as a comparison in Table 12. The results showed 100% of all sampled universities disclosed information relating to risk governance structure formation fully as of 2015.

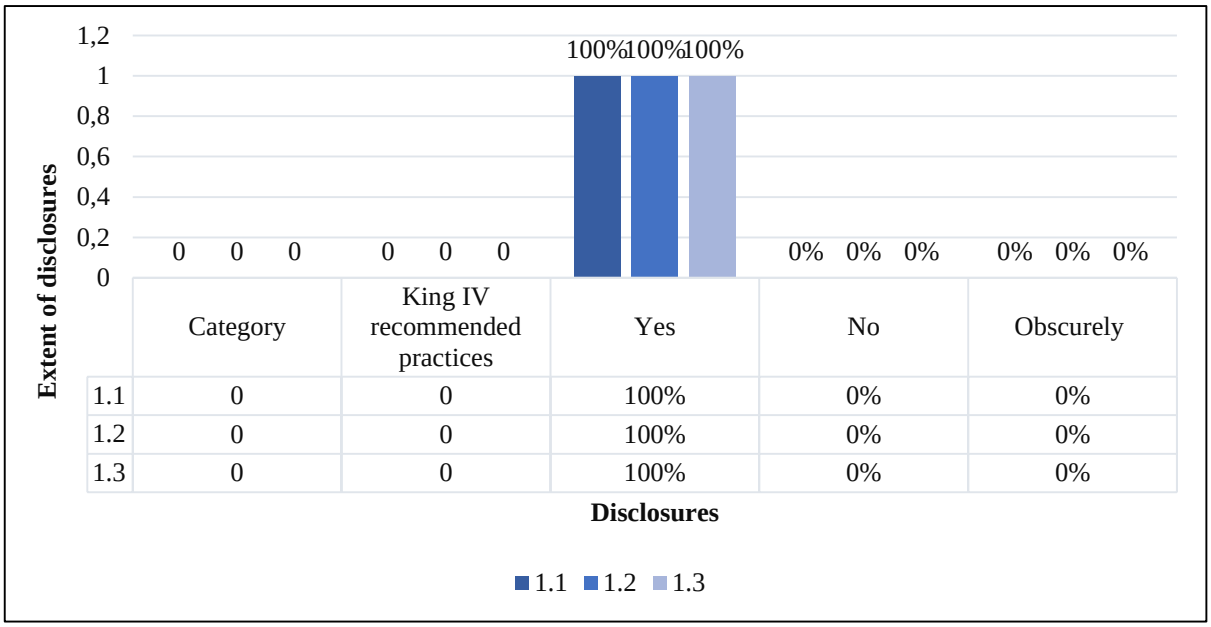


Figure 9 Risk governance structure 2016 disclosure

Shown in Figure 9 above are the 2016 comparison results for risk governance structure disclosures as discussed.

As discussed in Section 4.3 that King IV came with the "Apply and explain" concept. Hence, the first objective of Checklist 1 was to assess the extent of risk management practice disclosures as applied by South African universities. Checklist 1 concurrently assessed the actual application of the risk management practices as recommended by King IV. To accomplish this, three application categories were created known as Applied, Not Applied and Partial Applied. While the content analysis was conducted to assess the extent of disclosures in Section 4.3.2 above. The researcher concurrently conducted an intensive content analyses to assess if the recommended risk management practices disclosed were applied. All recommended practices Applied were marked as YES, Not applied marked as No. Lastly, sampled universities that applied some components of the recommended practice were marked as Partial.

All universities which applied the recommended practices for effective risk management were added together and presented as a percentage of YES, all those that did not apply were presented as a percentage of No and lastly, all those that partially applied were presented as a percentage of Partial.

Presented Figure 10 below are the King IV recommended practices results as applied by South African universities for Section one of the Checklist know as a Risk governance structure.

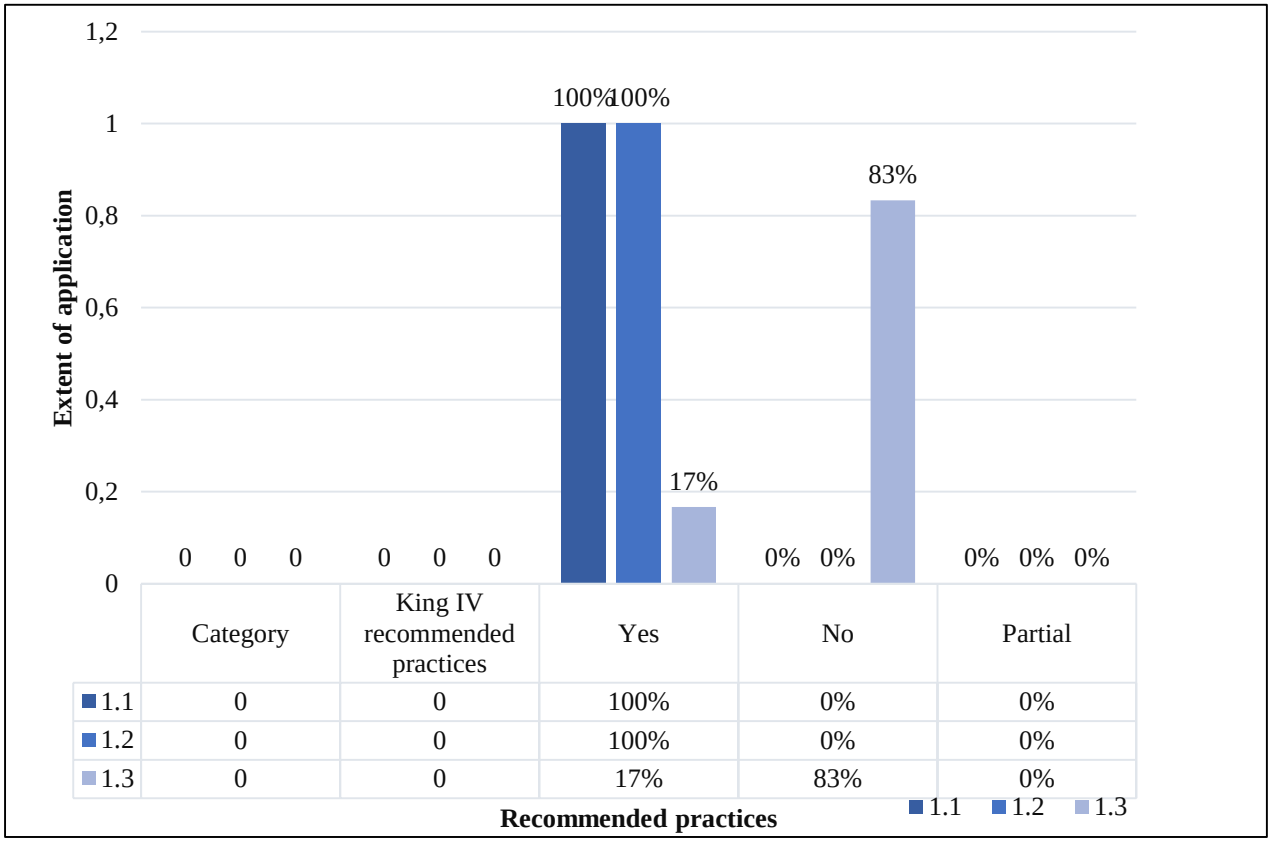


Figure 10: Risk governance structure application 2017

Figure 10 presents the results for King IV application recommended practices applied and explained are presented in Table 13.

Table 13: Risk governance structure application 2017

			King IV Application		
No	**Category**	**King IV recommended practices**	**Yes**	**No**	**Partial**
1.1	**Risk Governance structure**	The Council should consider allocating the oversight role of risk governance to a dedicated committee or adding it to the responsibilities of another committee such as the audit committee	100%	0 %	0%

1.2	**Risk Governance structure**	If the audit and risk committees are separate, the Council should consider one or more members to be a member of both committees for more effective functioning	100%	0 %	0%
1.3	**Risk Governance structure**	The committee for risk management should have executive and non-executive members, with the majority being non-executive members	17%	83 %	0%

Figure 10 and Table 13 reflects on the results from the application of King IV recommended practices relating to the risk governance structure. In the year 2017, All sampled universities (100 %) formed either a risk committee or audit committee. As well, on instances where the risk committee and the audit committee were separate, one member was part of both committees for effective performance. Additionally, nearby 83% of sampled universities' risk committee consisted of executive and non-executive members, with approximately 17 % of sampled universities not yet changed the formation of their risk governance committees in 2017 as King IV was issued in 2016. This also affected applications in 2015 and 2016 respectively as King III was in existence in 2015. Consequently, universities would have applied King III principles which were later updated into recommended practices in 2016 by King IV.

From above, it can be concluded that South African universities have established the structure to govern risk through an audit committee or a standalone committee such as a risk management committee. Thus far, some universities have not changed their formation as

recommended by King IV. Figures 11 and Figure 12 both present the extent of King IV application in 2015 and 2016, further illustrating the extent of application and disclosures.

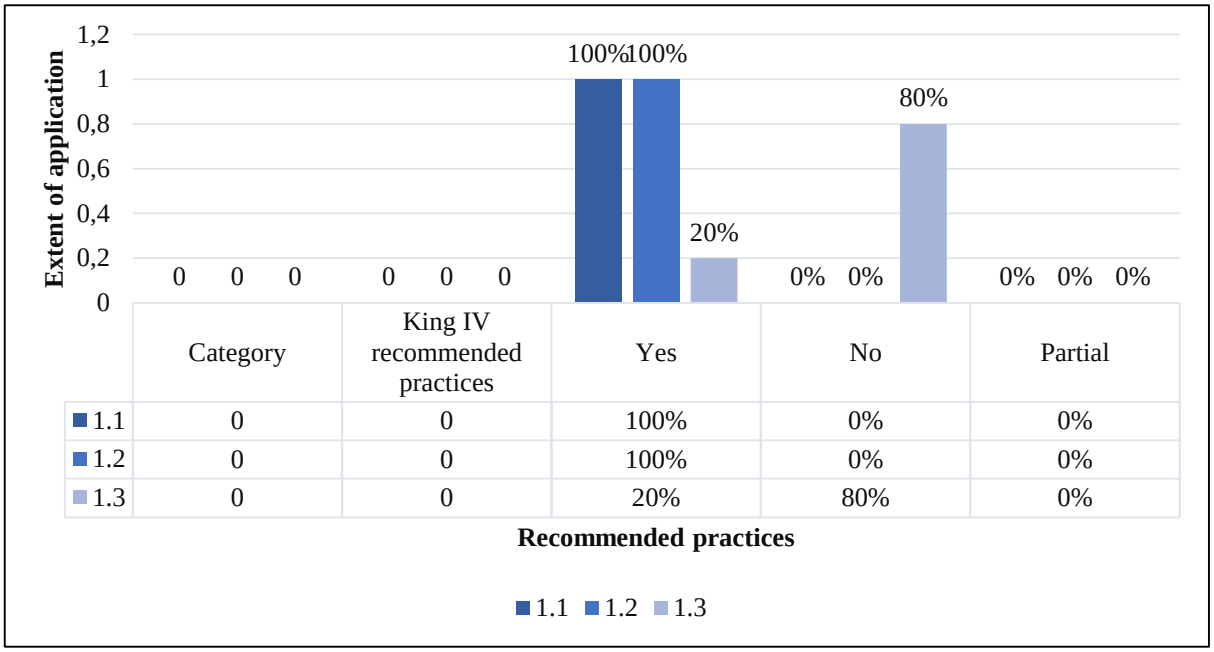


Figure 11 Risk governance structure 2015 disclosure

As indicated in Figure 11, the recommended practices for effective risk management were applied in the year 2015 as discussed above. Except for No 1.3 as almost 80% of sampled universities did not apply, as King IV was not issued as yet, and universities applied King III principles. This non-application decreased from nearly 80% in 2015 to 67% in 2016 as King IV was effective.

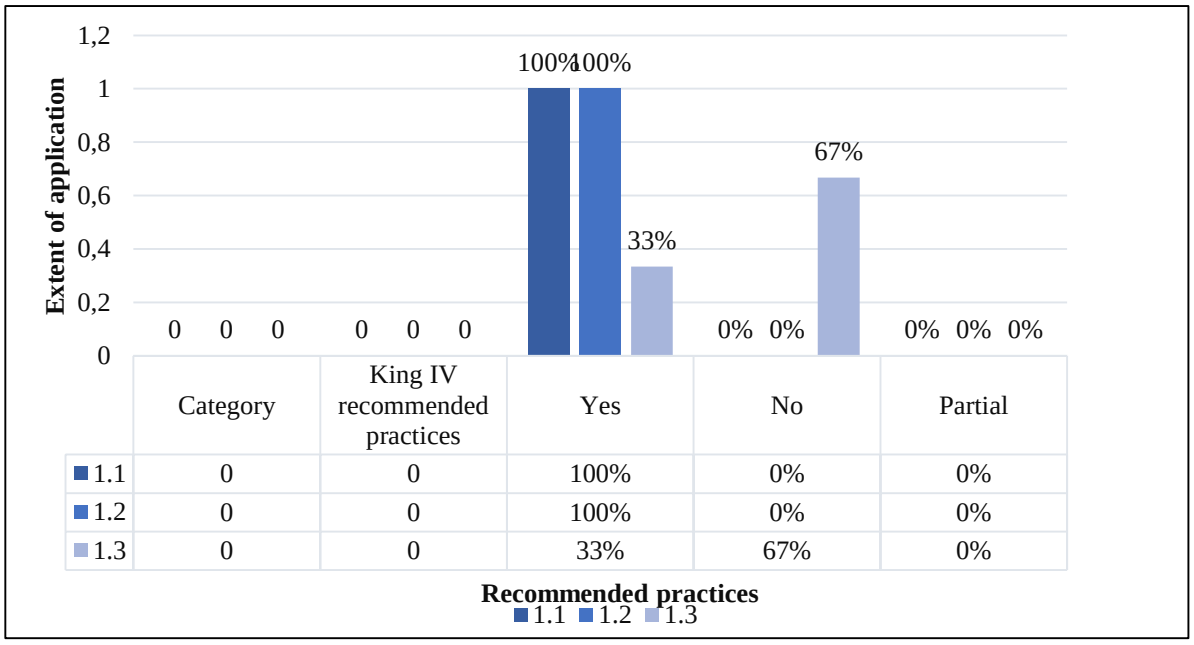


Figure 12 Risk governance structure application 2016

Presented in Figure 12 above are the 2016 results for the actual risk management practices applied by South Africa universities as discussed above.

4.3.3 Risk management practices- Disclosures

Presented below are the results for Section two of Checklist 1 known as Risk management practices which assess the extent of risk management practices disclosures by South African universities. All universities marked as fully disclosed were added together and presented as a percentage of YES and the same applied with NO and Obscurely.

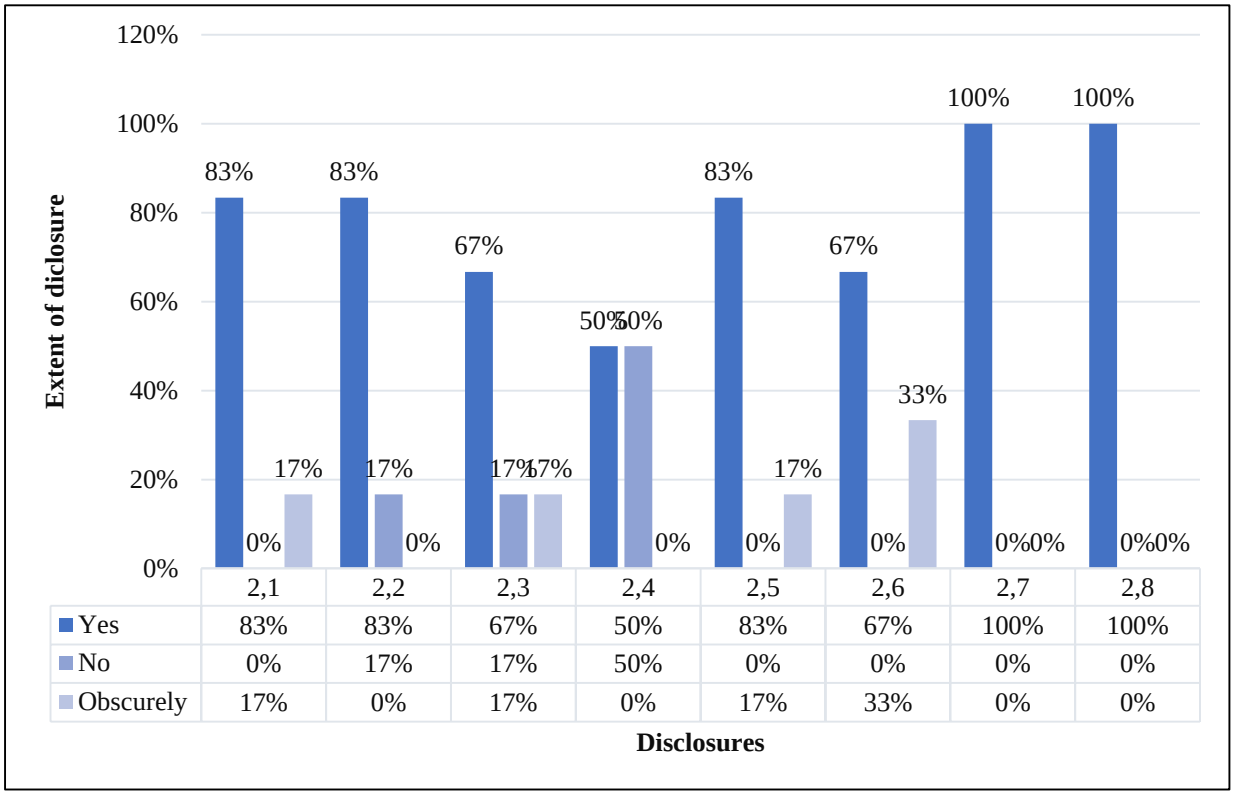


Figure 13: Risk management practices disclosures 2017

Figure 13 above presents the 2017 results, assessing the extent of disclosure by South African universities as recommended by King IV for effective risk management. For detailed disclosures on the actual risk management practices applied, Table 14 below provides the details and analysis.

Table 14: Risk management practices disclosures 2017

			Disclosures		
No	**Category**	**King IV recommended practices**	**Yes**	**No**	**Obscurely**
2.1	**Risk Management Practices**	The council should assume the responsibility to govern risk or through a dedicated committee by setting the direction for how risk should be approached and addressed in the university, including the following: The potential positives and negatives effects of the risk in the achievement of objectives.	83%	0%	17%
2.2	**Risk Management Practices**	The council should treat risk as integral to the way it makes decisions and executes its duties	83%	17%	0%
2.3	**Risk Management Practices**	The Council should approve policies that articulate and gives effects to its set direction on risk	67%	17%	17%
2.4	**Risk Management Practices**	The Council should evaluate and agree on the nature and extent of risks that the organisation is willing to take in pursuit of its strategic objectives, such as: Should approve the universities' risk appetite and risk tolerance	50%	50%	0%
2.5	**Risk Management Practices**	The Council should delegate to management the responsibility to implement and execute effective risk management	83%	0%	17%

2.6	**Risk Management Practices**	The Council should exercise ongoing oversight of risk management to ensure the following: 1. An assessment of risks and opportunities 2.An assessment of opportunities presented by risks. 3. The design and implementation of appropriate risk responses 4.The establishment and implementation of business continuity arrangement 5.The integration and embedding of risk management in the business activities and culture of the university.	67%	0%	33%
2.7	**Risk Management Practices**	The following should be disclosed concerning risk: 1. An overview of the arrangement for governing and managing risks 2.Key areas of focus during the reporting period, including objectives, the key risk facing the University, as well as unexpected or unusual risk and risk taken outside the risk tolerance levels 3. Actions were taken to monitor the effectiveness of risk management and how outcomes were addressed	100%	0%	0%

2.8	**Risk Management Practices**	The Council should consider the need to receive periodic assurance on the effectiveness of risk management.	100%	0%	0%

Figure 13 and Table 14 reflects on the extent of disclosure by South African universities on risk management practices as recommended by King IV. For clarity and analysis each recommended practice is discussed under the headings below:

Practices No 2.1: Responsibility to govern risk

As shown in Table 14 above nearly 83% of sampled universities fully disclosed information relating to the responsibility to govern risk by the council or a dedicated committee. Still, around 17 % of sampled universities did not disclose information regarding the responsibility to govern risk.

Practice No 2.2: Risk integral to decision-making

The same can be said with practice No 2.2 as approximately 17 % of sampled universities did not clearly outline that the council treats risk as integral to the way it makes decisions and executes its duties.

Practice No 2.3: Annual policies revision and approval

As indicated in Table 14 above, around 67% of the sampled universities disclosed information relating to annual revision and approval of policies, despite, the 17% which did not disclose whatsoever. The remaining 17% of sampled universities obscurely disclosed as they mentioned polices. Yet, they did not outline if they were approved by the council. This could be due to poor quality of disclosures and the lack of details on approval, even though practiced within the university. According to the COSO (2004), organisations should set the tone at the top by establishing a code of conduct, policies and training programs on risk and ethics. Thus, having up to date policies promotes an ethical environment.

Practices 2.4: Defining and approval of risk appetite and tolerance level

About the definition and approval of risk appetite and tolerance by the council. Just 50% of the sampled universities disclosed fully, whereas the remaining 50% at all. Perversely, this could be due to the universities not yet adopted the recommended practices, as the preceding King codes did not have a principle or did not require an organisation to define risk appetite and tolerance levels.

Nevertheless, the importance of risk appetite cannot be ignored as the ERM framework and King IV all recommend the definition of these levels so that risk can be taken within acceptable levels and monitored (PWC, 2016; IoD, 2016; COSO, 2017; ISO; 2009).

Practice No 2.5 Delegation of responsibility for implementation of effective ERM

For clarity, this practice recommends the council to delegate to management the responsibility to implement effective ERM. The results have shown 83% of sampled universities disclosed information relating to the council, delegating to management the responsibility to implement an effective risk management program, whereas around 17 % of universities obscurely disclosed as the annual report shows the responsibilities. Yet, there was no delegation to implement effective risk management and also disclosed the head of departments, faculties and academics conducting risk assessment which demonstrates the implementation of risk management. Hence, classified as obscurely disclosed.

Practices No 2.6: Ongoing oversight to ensure the following:

- An assessment of risks and opportunities
- An assessment of opportunities presented by risks.
- The design and implementation of appropriate risk responses.
- The establishment and implementation of a business continuity arrangement.
- The integration and embedding of risk management into the business activities and culture of the university.

Nearly 33% of sampled universities obscurely disclosed information related to this practice as it consists of several recommended practices. Consequently, nearly 67% of sampled universities partially applied and disclosed some of the requirements, Notable, the Obscure disclosure was due to factors such:

- The lack of business continuity plan arrangements for volatile operational environments such as the #Feesmustfall.
- Integrating and embedding of risk management practices within the culture and activities of the university.
- Even though disclosures on risk assessment were complete, assessment of opportunities presented by risk was also a challenge as it was not disclosed.

However, disclosures on risk responses and mitigation plans were fully disclosed by all the sampled universities (100%).

Practice No 2.7: Disclosure on overview of the following:

- Arrangement to govern risk
- Key focus area
- Monitoring on the effectiveness of risk management practices

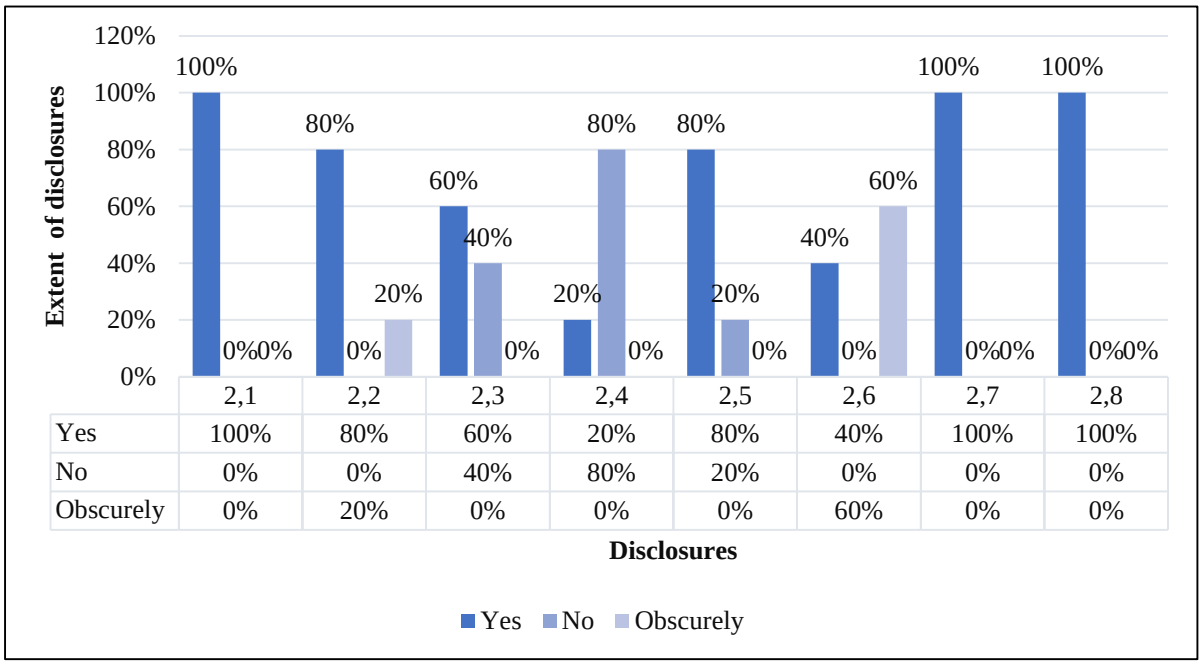
All sampled universities (100%) fully disclosed their arrangements to govern risk such as the formation of the risk committee and conducted risk assessment workshops. Additionally, the focus areas during risk assessment were also outlined. Finally, all the sampled universities were monitoring risk with the right reporting structures for communication.

Practice No 2.8: Periodic assurance on the effectiveness of risk management

All sampled universities (100%) received periodic assurance on the effectiveness of risk management processes.

4.3.3.1 Risk management practices comparison- Disclosures

Presented in Figure 14 and Figure 15 for the comparison years 2015 and 2016 respectively.



	2,1	2,2	2,3	2,4	2,5	2,6	2,7	2,8
Yes	100%	80%	60%	20%	80%	40%	100%	100%
No	0%	0%	40%	80%	20%	0%	0%	0%
Obscurely	0%	20%	0%	0%	0%	60%	0%	0%

Figure 14: Risk management practice disclosure 2015

Figure 14 reflects above on the risk management practices disclosures as comparison results for 2015 discussed above.

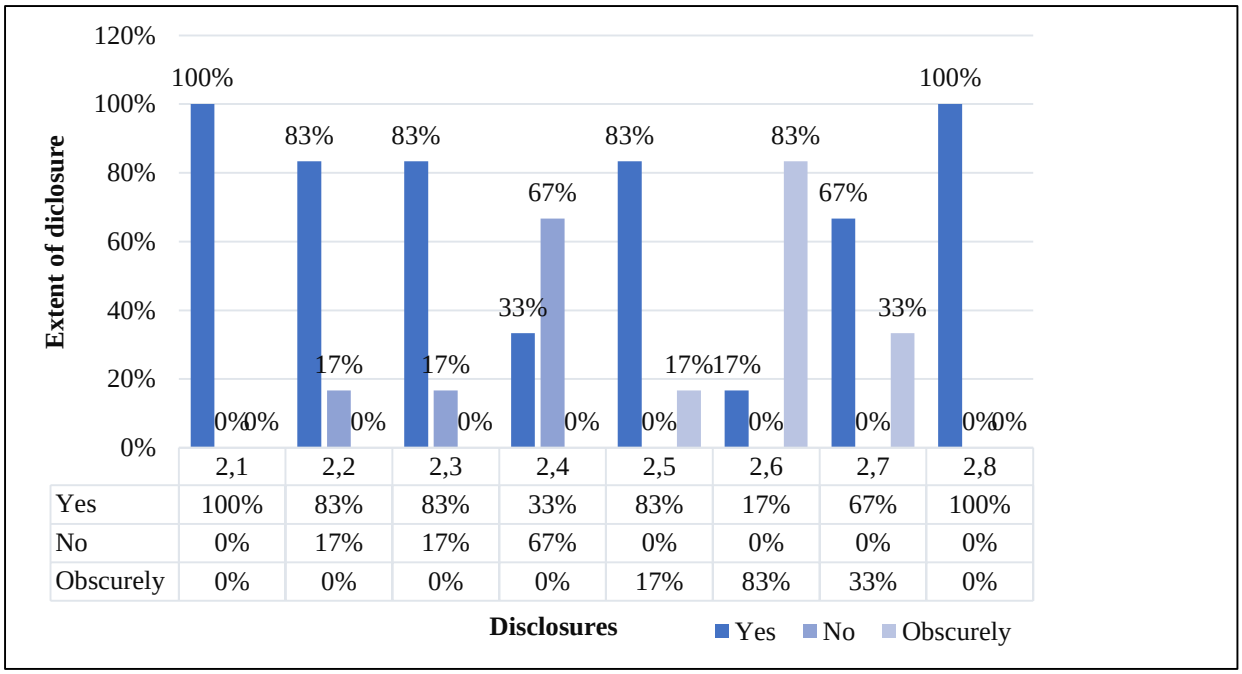


Figure 15: Risk management practice disclosure 2016

Figure 15 above presents the risk management practices disclosure for 2016 as discussed below:

Though, King IV was not yet issued in 2015. Referable to the King III principles some practices were already being implemented by the sampled universities as King IV was an expansion and improvement of previous King codes. Hence, All sampled universities (100%) disclosed information related to practices No 2.7 and 2.8 which consist of monitoring and receiving independent assurance and consistent for the period under review. In 2018 100% of the sampled universities disclosed practices No 2.1, compared to 83 % of sampled universities in 2017 and 100% of sampled universities in 2016 as shown in Figure 15.

Concerning recommended practice, No. 2.2, the results have shown that 80 % of sampled universities disclosed in 2015 compared to 83% in both 2016 and 2017. As shown in Figure 15 practice No 2.3 relates to approval of policies and have shown 60 % of sampled universities disclosed while and increased to 83% in 2016 as King IV was introduced, governance received attention, Moreover, the #Feesmustfall started in 2015 and most universities in 2016 strengthened their policies and procedures revisions, Though, the disclosure declined to 67% in 2017 as the practice were not maintained.

Additionally, the years 2015 and 2016 displayed a higher non-disclosure of recommended practices No 2.4 at 80 % and 83% of sampled universities not making disclosures in the respective years. This is due to the requirements of developing and approving risk appetite and

tolerance level only coming into existence in 2016. Therefore, most universities had not adopted compared to 2017 where it was only 50% non-disclosure.

Moreover, recommended practices No 2.5 revealed that about 80% of sampled universities disclosed in 2015 compared to 100% in 2016 and 83% in 2017. While, the year 2017 revealed an Obscure disclosure regarding practice No 2.6 at 33 % of sampled universities that did not give full details, as well 60 % disclosure in 2015 and 83 % in 2016 correspondingly, showed a significant improvement ascribed to the adoption and application of King IV maturing.

Notably, South African universities disclosed the recommended practice recommended by King IV as about 80% of sampled universities disclose the majority of the recommended practices. This demonstrates compliance with the higher education reporting guidelines and the requirements of the Higher Education Act No 101 of 1997 and King IV (RSA,1997; IoD, 2016). However, there are still challenges that existed in the extent of risk management practice disclosures such as:

- Annual revision and approval of policies by the council as it disclosed by nearly 67% of sampled universities.
- Secondly, it was noted that the extent of disclosure relating to the establishment of risk appetite and risk tolerance level. Even though it has improved when compared to previous years, it still shows 50% of sampled universities did not disclose as the results depicted that, about 67% of sampled universities have not yet adopted the recommended practice.
- Lastly, around 33% of universities Obscurely disclosed practice No 2.6. These practices consisted of few requirements. Arguably, the challenges were the lack of detailed disclosure relating to the assessment of opportunities, business continuity arrangements and integrating risk management into daily activities and culture of the universities. However, further analysis of the application of these practices will be discussed in Section 4.3.4**.** These results are consistent with the study on annual report disclosure in the USA, Canada and Germany, which has discovered that qualitative risk disclosure is frequently compared to quantitatively and submit that organisations are struggling to quantify risk exposure (Dobler *et a*l., 2011).

These insights address the gap identified researchers in the South African context, who conducted corporate governance disclosures utilising previous King codes and outlined that, there is a lack of detailed disclosures on the actual risk management practices. Yet, the issuance

of King IV and the "Apply and Explain" concept, which requires organisations to disclose and explain, how they have applied the recommended practices to govern risk (IoD, 2016; Barac, Marx & Moloi, 2011; Moloi, 2013; Moloi, 2014)

4.3.4 Risk management practices- King IV application.

As discussed in Chapter 3 King IV introduced the "Apply and Explain" concept, which stated organisations should apply the recommended practices of good governance and explain how they were applied (IoD, 2016). This calls for organisations applying risk management practices and discloses in the annual report.

While Section 4.3.2-4.3.3 explored the extent of disclosure of the adopted recommended practices by South African universities. This Section, the researcher sought to further establish if the recommended practices were indeed applied and explained through disclosure in the annual reports as recommended by King IV. Consequently, the Risk disclosure checklist was also utilised to assess King IV application.

Shown below are the results for Section two of Checklist 1 known as a Risk management practice, which assesses the actual application of the risk management practices recommended by King IV. All universities that applied a practice were added together and shown as a percentage of YES and the same applied with NO and Partial respectively.

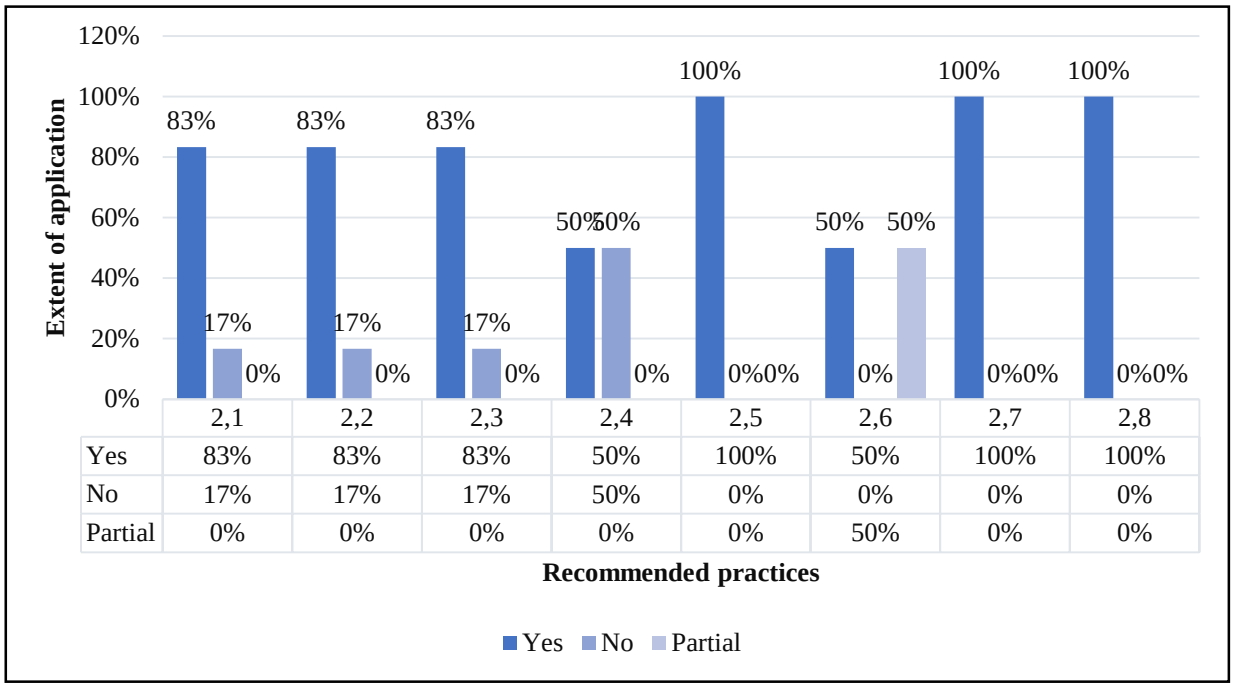


Figure 16: Risk management practices- King IV Application 2017

Presented in Figure 16 are the actual risk management practices as recommended by King IV and as applied and explained by South African universities. Table 15 beneath gives a detailed analysis.

Table 15 Risk management practices- King IV Application 2017

			Application		
No	**Category**	**King IV recommended practices**	**Yes**	**No**	**Partial**
2.1	**Risk Management Practices**	The Council should assume the responsibility to govern risk or through a dedicated committee by setting the direction for how risk should be approached and addressed in the university, including the following: The potential positives and negatives effects of the risk in the achievement of objectives.	83%	17%	0%
2.2	**Risk Management Practices**	The Council should treat risk as integral to the way it makes decisions and executes its duties	83%	17%	0%

2.3	**Risk Management Practices**	The Council should approve policies that articulate and gives effects to its set direction on risk	83%	17%	0%
2.4	**Risk Management Practices**	The Council should evaluate and agree on the nature and extent of risks that the organisation is willing to take in pursuit of its strategic objectives, such as: Should approve the universities' risk appetite and risk tolerance	50%	50%	0%
2.5	**Risk Management Practices**	The Council should delegate to management the responsibility to implement and execute effective risk management	100 %	0%	0%
2.6	**Risk Management Practices**	The Council should exercise ongoing oversight of risk management to ensure the following: 1.An assessment of risks and opportunities 2.An assessment of opportunities presented by risks. 3. The design and implementation of appropriate risk responses 4.The establishment and implementation of business continuity arrangement 5.The integration and embedding of risk management in the business activities and culture of the university.	50%	0%	50%
2.7	**Risk Management Practices**	The following should be disclosed concerning risk: 1. An overview of the arrangement for governing and managing risks 2.Key areas of focus during the	100 %	0%	0%

		reporting period, including objectives, the key risk facing the university, as well as unexpected or unusual risk and risk taken outside the risk tolerance levels 3. Actions were taken to monitor the effectiveness of risk management and how outcomes were addressed			
2.8	**Risk Management Practices**	The Council should consider the need to receive periodic assurance on the effectiveness of risk management.	100 %	0%	0%

Data offered in Figure 16 is also explained in Table 15 and explains the results for the assessment of risk management practices as applied by South African universities in 2017.

Practices No 2.1: Responsibility to govern risk

The council should take up the responsibility to govern risk or through a committee dedicated to risk management and set the direction for risk management with defined responsibilities. In this regard, about 83% of the sampled universities applied and disclosed in 2017, compared to 100% in 2015 and 100% in 2016 respectively. However, this was due to one university which did not disclose sufficient information in 2017. The university had a 35-page annual report with a few pages dedicated to risk management. The rapidly changing operational environment and strategic objectives resulted in emerging risks such as demand for free higher education, which may perhaps entirely shift their business model and strategic goals. Consequently, there is a need for these universities to adopt and apply risk management practices to manage these potential disruptions and develop response strategies to assure stakeholders of their sustainability (Moloi, 2016).

Practice No 2.2: Risk integral in decision-making

Regarding practice No 2.2, about 17 % of sampled universities did not clearly outline that, the council treats risk as integral to the way it makes decisions and executes its duties. However, around 83 % of sampled universities applied and explained in 2017. These results were

reproducible with the previous year's figures, demonstrating that the majority of the university's council treated risk as an important aspect of decision-making.

The above resulted in a strategic risk assessment to ensure potential risks are managed without affecting the achievement of strategic goals. According to Moloi (2015), South African universities have been pressured to change their long-term plans due to the rapid challenges and increased pressure to ensure sustainability ascribed to calls for free higher education and decolonisation of higher education. Subsequently, these demands becoming reality could threaten their sustainability, societal position and business model. Thus, South African universities should develop and implement response strategies to proactively manage these challenges. Moreover, the failure to effectively manage risks can lead to universities not meeting their objectives and jeopardise their survival (Rustambekov, 2010).

Practice No 2.3: Annual policies revision and approval

In terms of policy approvals by the council as outlined in recommending practice No 2.3, the results have shown that 83% of sampled universities applied and explained in 2018. These figures are consistent with 2016 as shown in an application by 83% of sampled universities and improving from 60% in 2015. This is due to the King IV not yet issues in 2015, Moreover, the # Feesmustfall disruptions resulting in universities revising and updating their policies to enforce student to comply with institutional policies as the protest resulted in student arrests and court cases in 2016 and 2017 (Maphetha, 2016) ... .Also contributing to the disclosure in 2016 and 2017 can be accredited to the maturity of risk governance adoption as per King IV and reporting requirement which creates an ethical environment.

Practices 2.4: Defining and approval of risk appetite and tolerance level

The results show that 50% of the sampled universities in 2017 did not apply King IV's risk management recommended practices No 2.4. The requirement advises the council to define and approved risk appetite and risk tolerance levels that the universities are willing to take in pursuit of their strategic objectives. This is an extreme improvement as 83% of sampled universities did not apply in 2016 and 80% in 2015 respectively. Arguably, an annual report disclosure study in the USA, Canada and Germany has revealed that qualitative risk disclosure is frequently compared to quantitative suggest that organisations are struggling to quantify risk exposure (Dobler *et al.*, 2011).

Practice No 2.5 Delegation of responsibility for implementation of effective ERM

This practice recommends the council to delegate to management the responsibility to implement effective ERM. Consequently, it was applied by all sampled universities (100%) in 2017 and 2016 as the council delegated to management the responsibility to implement effective ERM compared to 83 % of sampled universities in 2015.

Even though 17% of sampled universities obscurely disclosed under Risk management practices disclosure. These principles were applied as management conducted risk assessment workshops and resources were made available to affect risk management.

Practices No 2.6: Ongoing oversight to ensure the following:

1) An assessment of risks and opportunities
2) An assessment of opportunities presented by risks.
3) The design and implementation of appropriate risk responses
4) The establishment and implementation of business continuity arrangement
5) The integration and embedding of risk management in the business activities and culture of the university.

Nevertheless, around 50% of the sampled universities applied and explained all elements recommended by practice No 2.6 as of 2017, improving from 100 % partial application in 2015 and 83% in 2016. Arguably, this is due to some universities not yet have developed business continuity plans in 2015 and 2016. However, disruptions such as #Feesmustfall gave rise to disclosures such as the risk of disruption and vandalism which were of concern by the universities. Thus, some universities were considering developing business continuity and contingency arrangements. Hence, the increase to 50% of sampled universities in 2017. Moreover, the partial application was due to some universities disclosing information related to a lack of risk integration into daily operational activities and embedding in the culture of the universities (CPUT, 2017; UCT, 2017; TUT, 2017). Even so, according to Kageyama (2014) universities often associate with a small city as they consist of different campuses, faculties with different heads and stakeholders, industry and compliance requirements. Consequently, integrating and creating a risk culture can be challenging, especially for previously divided organisations due to the past.

Practice No 2.7: Disclosure on overview of the following:

- Arrangement to govern risk

- Key focus area
- Monitoring on the effectiveness of risk management practices

The sampled universities have shown 100% full disclosure and application in 2017 and 2015, except for practices No 2.17 which was applied and explained by 83% of sampled universities in 2016. This was due to one university which did not apply and explain information related to the council ensuring monitoring on the effectiveness of risk management practices.

Practice No 2.8: Periodic assurance on the effectiveness of risk management

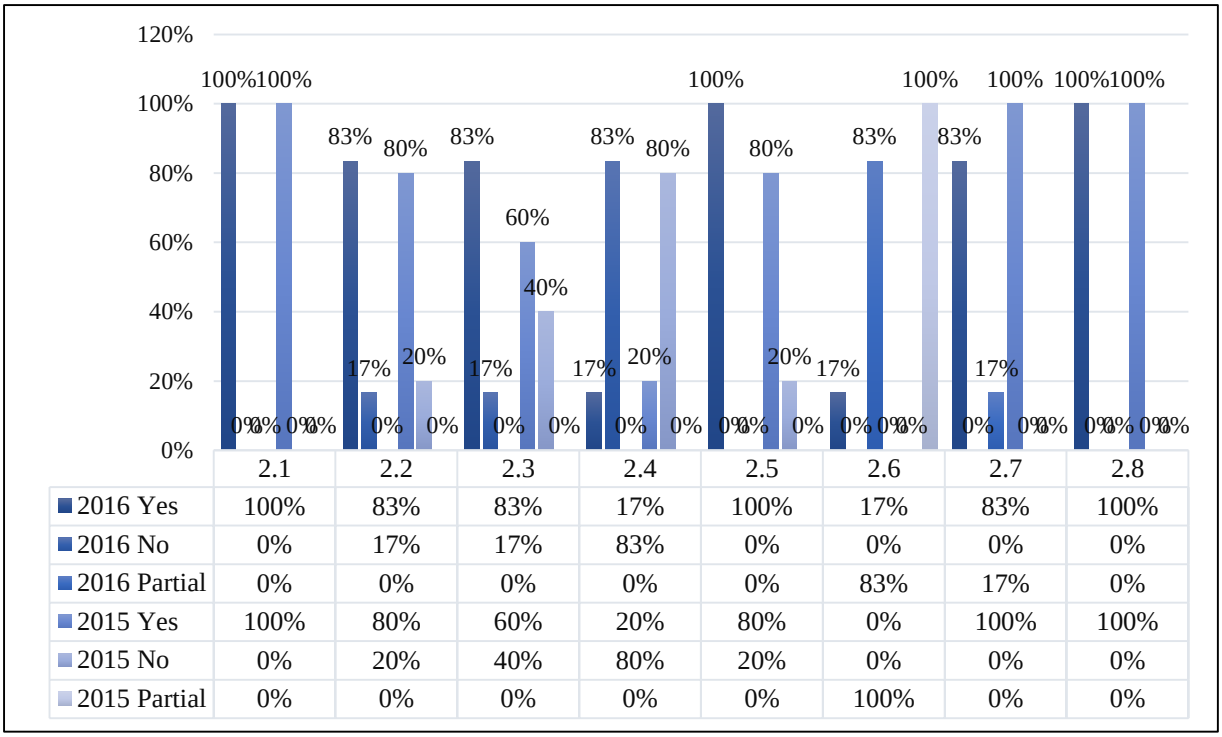
All sampled universities (100%) received periodic assurance on the effectiveness of risk management practices.

Noteworthy, disclosure does not always translate to the application as some universities disclosed information regarding the recommended practice such as disclosure on the adoption of risk appetite, which was still being considered. Yet, that did not mean they were adopted and applied.

Moreover, these were the challenges in adoption, application and disclosures:

- Annual revision and approval of policies by the council disclosures quality. Even though 83% of sampled universities applied in 2017, about 67 % of sampled universities fully disclosed.
- In the year 2017, 50% of sampled universities developed their risk appetite and tolerance levels, compared with at least 33 % of the sample which obscurely disclosed. This is due to some universities not yet developed and approved their risk appetite levels.
- Lastly, the development and implementation of business continuity plans and embedding and integrating risk management into the daily activities and culture of the universities.

Figure 17 below demonstrates the risk management practices applied by South African universities in 2015 and 2016 as compared and discussed above.



	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8
2016 Yes	100%	83%	83%	17%	100%	17%	83%	100%
2016 No	0%	17%	17%	83%	0%	0%	0%	0%
2016 Partial	0%	0%	0%	0%	0%	83%	17%	0%
2015 Yes	100%	80%	60%	20%	80%	0%	100%	100%
2015 No	0%	20%	40%	80%	20%	0%	0%	0%
2015 Partial	0%	0%	0%	0%	0%	100%	0%	0%

Figure 17 Risk management practices- King IV application 2015 and 2016

Presented in Figure 17 are the results of the risk management practices applied and explained by South African universities as recommended by King IV for the years 2015 and 2016 as comparison years.

Therefore, risk management practice application improved in certain areas in 2017 compared to 2015 and 2016. New practices were introduced with King IV in 2016 resulting in improved disclosure ascribed to the "Apply and Explain" concept and HEIs reporting guidelines that were developed as per King III. However, the extent of application varies based on the quality of disclosures. Thus, certain areas were not 2015 as King III did not have the "Apply and Explain" concepts, but rather the "Apply or Explain" which was rules-based. The main aspects relating to non-application was due to some universities not yet adopted recommended practices as per King IV, such as annual revision and approval of policies, integration and embedding of risk management practices in the day to day activities and culture of the universities and lastly monitoring on the effectiveness of risk management practices for improvement.

4.3.3.4 Risk governance maturity

To comprehend how risks are governed by South African universities and assess risk governance maturity thereof. A second Checklist was developed, which comprised of risk governance maturity levels as per literature on risk management maturity framework. Within these levels of risk governance, minimum requirements were developed using risk management maturity frameworks, governance frameworks and King IV for good governance. The minimum risk governance requirements are constructed with risk governance structure, processes and responsibilities for accountability. To understand how risks are governed by South African universities... The researcher assessed if the minimum risk governance requirements within these levels were incorporated by the sampled universities. While concurrently assessing risk governance maturing by South African Universities.

Therefore, all universities that incorporated the minimum risk governance requirements as a proxy for risk governance were added and marked as YES, all those that did not incorporate a recommended practice are marked as NO and presented as a percentage. The minimum risk governance requirements per category were identified and classified into different levels of risk maturity. For simplification purposes and detailed analysis, the risk governance requirements are discussed separately per maturity level.

Table 16 Risk governance Maturity Level 1 2017

			Minimum requirements Incorporated	
NO	**Levels of Maturity**	**Risk Governance minimum requirement per level**	**Yes % as per Total reports**	**No % as per Total Reports**
1.1	**Level 1- Nascent**	There is no structure for risk management	0%	100%
1.2	**Level 1- Nascent**	There is no commitment by management to ERM	0%	100%
1.3	**Level 1- Nascent**	Risks are address as they come without anticipation of potential risks	0%	100%

Table 16 shows the proportion of universities that incorporated the minimum risk governance requirement as a proxy for risk governance as per Level 1 maturity.

As indicated in Table 17, all sampled universities had a structure for risk governance such as an audit committee or a standalone committee such as risk management. Besides, 100% of the sampled universities' council is committed to ERM and risk assessments were conducted to ensure risk that threatened strategic objectives are addressed before they occur. These figures were consistent with 2016, except in 2015 where one university in which management did not commit effective ERM. This could be caused by insufficient information disclosures.

The comparative figures for 2015 and 2016 can be found in Figure 18 below

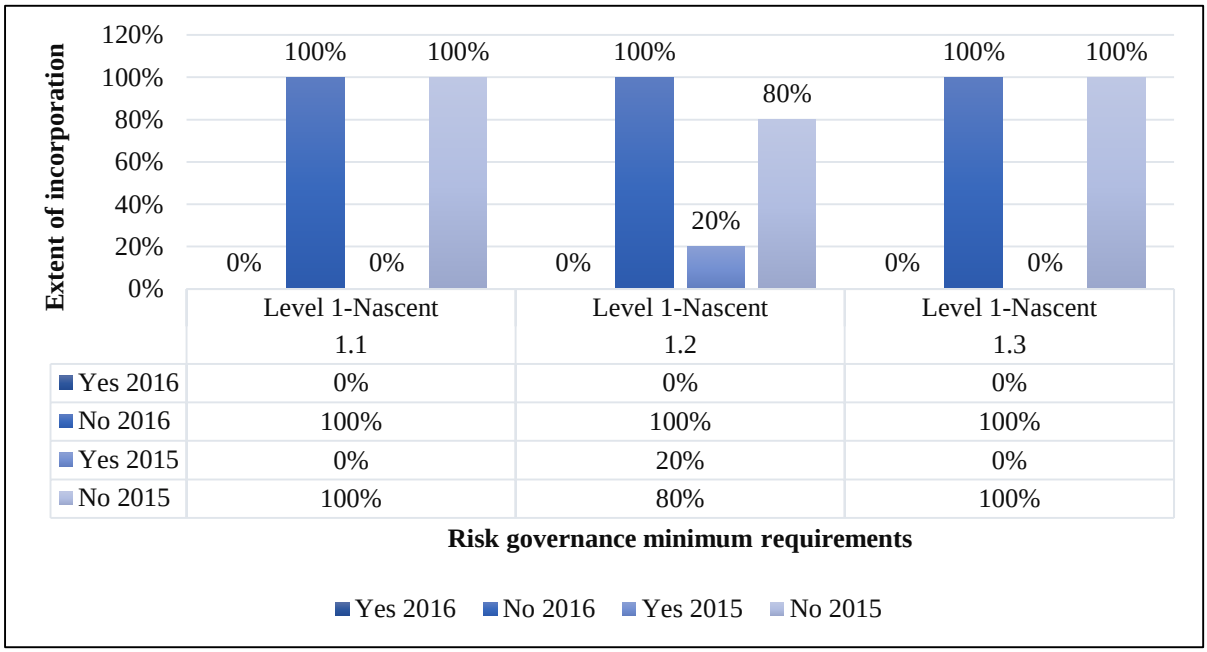


Figure 18 Risk governance maturity Level 1 2015 and 2016 comparison

Deduced from above, South African universities are making progress regarding risk governance as all sampled universities (100%) are mature beyond level 1 known as Nascent as risk management is formalised and risks are addressed by identifying potential merging risk and there are proper risk governance structures in place.

			Minimum requirements Incorporated	
NO	**Levels of Maturity**	**Risk Governance minimum requirement per level**	**Yes % as per Total reports**	**No % as per Total Reports**
2.1	Level 2-Emerging	Basic ERM Processes are in place	100%	0%
2.2	Level 2-Emerging	The Council has allocated oversight role for risk governance to Committee or risk practitioner	100%	0%
2.3	Level 2-Emerging	Resources are made available for risk management	100%	0%
2.4	Level 2-Emerging	Risk are identified and assessed	100%	0%
2.5	Level 2-Emerging	There is a business continuity plan in place	50%	50%

Table 17 Risk governance maturity Level 2 2017

Table 17 above present maturity level 2 results. Also, all sampled universities (100%) in 2015, 2016 and 2017 incorporated basic risk management procedures. Moreover, all sampled universities (100%) ensured that the council has allocated an oversight role for risk governance for all the years under review. Hence, from 2015-2017 the results for practice No 2.3 were 100% of all sampled universities for all the years as resources were made available for implementation of effective risk management. These resources included important elements such as establishing a risk committee, conducting assurance activities and the adoption of the risk management framework.

To the above, it can be deduced that 100% of sampled universities conducted a strategic risk assessment, while 100% of sampled universities did not have business continuity plans or contingency arrangements in 2015 and 2016. Hence, when the disruption took place in 2015, there were no contingency measures to recover the critical functions of the universities. Most universities in 2015 and 2016, disclosed and lack of and considering developing business continuity plans. Consequently, in 2017 there was a 50% split between universities, that developed business continuity and those that have not developed it (WITS, 2017; UCT, 2017; CPUT, 2017; TUT, 2017; NMMU, 2017).

Figure 19 below provides the comparison results for 2015 and 2016 as discussed above

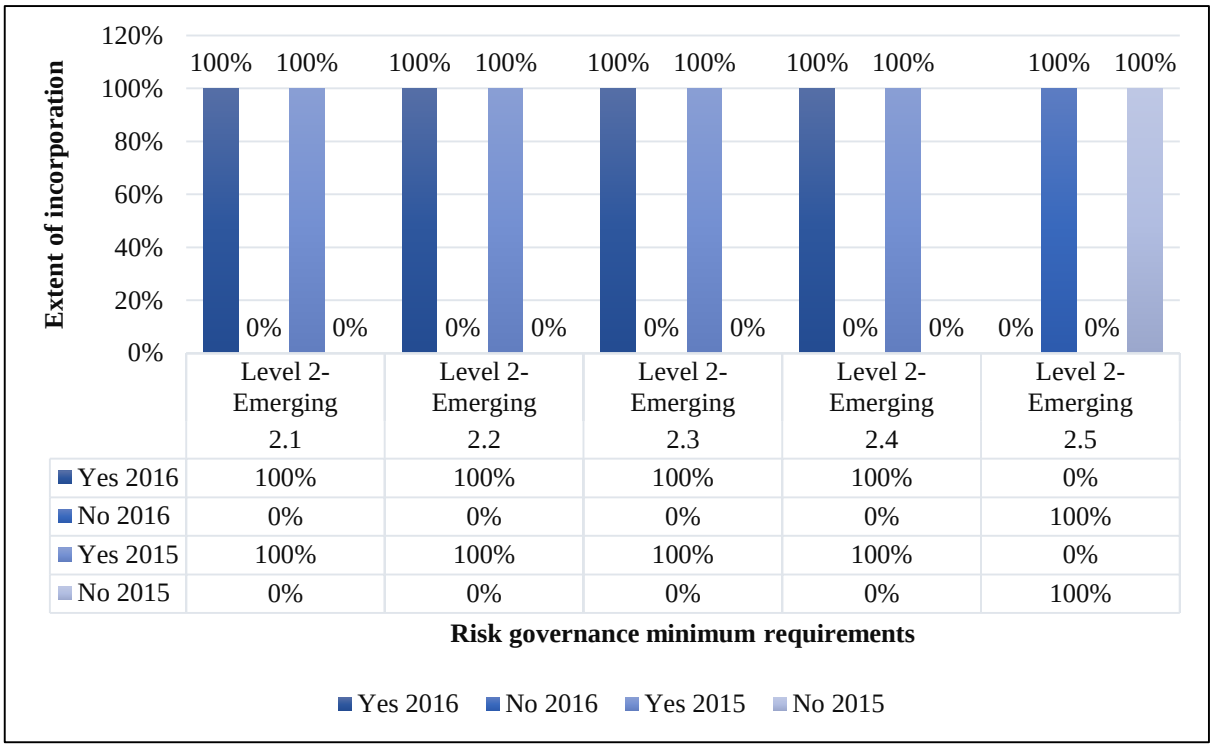


Figure 19 Risk governance maturity level 2 2015 and 2016

From the above discussion, South African universities' governance practices have mature beyond level 2 of risk governance maturity known as Emerging as they applied the minimum risk governance requirements and improving as started with the development of business continuity plans.

Table 18 Risk governance Maturity Level 3 2017

			Minimum requirements Incorporated	
NO	**Levels of Maturity**	**Risk Governance minimum requirement per level**	**Yes % as per Total reports**	**No % as per Total Reports**
3.1	Level 3-Integrated	There is committee delegated with the responsibility to govern risk	100%	0%
3.2	Level 3-Integrated	ERM program is endorsed by the Council	0%	100%
3.3	Level 3-Integrated	Roles and responsibilities are well-defined for accountability	100%	0%
3.4	Level 3-Integrated	Risk Management is integral part of day to day activities	83%	17%

3.5	Level 3-Integrated	Training on risk management is conducted	33%	67%
3.6	Level 3-Integrated	Council approved policies that articulates and gives effects to its set direction on risk	83%	17%
3.7	Level 3-Integrated	Risk appetite and tolerance level are defined and approved by the Council	33%	67%
3.8	Level 3-Integrated	An assessment of risks and opportunities are conducted	67%	33%
3.9	Level 3-Integrated	An assessment of opportunities presented by risks is conducted	17%	83%

Presented in Table 18 above are the results for risk governance level 3 known as Integrated. This level of maturity is the middle ground and has the most minimum risk governance requirement as driven by the mandatory requirements to manage risk. Most importantly, it emphasises on the integration of risk management into daily activities and embedding risk monument into the culture of the organisation. Therefore, requirement No 3.1, was incorporated by 100% of sampled universities over the years under review. However, universities had challenges with getting the council's endorsement for the ERM framework as 100% of sampled universities did not incorporate requirement No 3.2, as there was no disclosure in the annual report relating to ERM program endorsement. According to the Casualty Actuarial Society (2003), the implementation of these risk management processes, are affected by top management by setting the tone at the top and all employees by integrating ERM in daily activities. Thus, ERM should be endorsed by the council. Furthermore, the primary contributors to the required risk culture of an organisation are senior management by setting the tone at the top, prioritising and reinforcing the organisational culture (Barton & MacArthur, 2015).

Both in 2015 and 2017 100% of sampled universities clearly defined their risk management responsibilities for accountability. Except in 2016 where it was around 83% due to a university that did not disclose roles and responsibilities as per requirement No 3.3. Moreover, one of the most important prerequisites of this maturity level is making risk management an integral part of the day to day activities (PWC, 2016).

It can be argued that South African universities incorporated the requirements as 83% of sampled universities incorporated requirement No 3.4 from 2015- 2017. To create risk management awareness and be culture that integrates risk management in daily activities and operations, South African universities should conduct training on risk management as per requirement No 3.5 (IoD, 2016). In the year 2015, nearly 80% of sampled universities did not conduct risk management training. Nevertheless, that number improved as it reduced to 50% of the sample in 2016 and became 67% of sampled universities in 2017 respectively.

The sampled universities were consistent when it came to requirement No 3.6 which relates to the approval of policies that articulates and promotes risk management as 83% of sampled universities incorporated the requirement in 2016 and 2017 respectively. Also, for the year 2015, it was 60% of the sample. Still, it is important to note the challenges with clear disclosure of the policies. The results further indicate that 80% of sampled universities did not incorporate risk appetite and risk tolerance level as recommended by requirement 3.7 in 2015 and 83% in 2016. Notably, there has been some improvement as 67% of sampled universities had not incorporated the requirement as of 2017. Both requirements No 3.8 and 3.9 relate to risk assessment and assessing opportunities presented by risks. Even though risk assessment was conducted in 2015, approximately 80% of sampled universities did not assess opportunities presented by risk. Notwithstanding, in 2017 approximately 33% of universities did not incorporate requirement No 3.8 and 83% for requirement No 3.8 respectively. Nevertheless, in 2017, merely 33% of universities did not incorporate requirement No 3.8 and 83% of the sample did not incorporate requirement No 3.8. This affirms that, even if a risk assessment is conducted and disclosed, the majority of universities do not incorporate and disclose assessment of opportunities presented by risks (PWC, 2016; IoD, 2016).

Additionally, McDaniel (2007) stipulated that the HEIs operate in a complex setting and consist of diverse cultural dimensions with different interests and stakeholder expectations. Consequently, HEIs are now taking initiatives to improve their capabilities and resources to manage and monitor risks (Kameel, 2007). Not all controls are to be implemented as developing and implantation of controls cost money as they require resources, thus, one of the minimum risk governance requirements is to conduct cost vs benefit analysis for risk mitigation strategies as stated in requirement No 2.11. However, for the period under review, 100% of the sampled universities did not disclose any information, therefore, the researcher could not assess, if this requirement is incorporated or not.

Requirement No3.12 emphasises on implementation of business continuity rather than only development, as discussed under level 2 merging maturity, that 50% of sampled universities developed a business continuity plan in 2017. Yet, out of the 50% sample, only 33% disclosed implementation of the plans, an improvement as 100% of the sampled universities both in 2015 and 2016 did not incorporate the requirement. This increase can be attributed to the disruptions due to events such as #Feesmustfall, #Rhodesmustfall strikes, demand for free higher education and demand for the decolonisation of education disruptions causing vandalism and most universities and academic disruptions (Moloi, 2016). Most universities disclosed that they are considering business continuity programs to recover critical operations and sustainability.

One of the utmost important requirements for risk governance is the integration of risk management into everyday activities and culture of the university as stated in requirement No 3.13. This is confirmed by McKenzie (2018) as concluded that, the board has the ultimate responsibility to integrate risk in the daily activities of the organisation. In 2015, about 60% of sampled universities incorporated the requirement, which presented 83% and 100% in 2016 and 2017 respectively. According to Cloete et al (2002), the distinguishing factor between HEIs and for-profit organisation is that HEIs present a challenge, in implementing effective leadership due to anarchic structure which comprises of departments, chairs, deans, faculties which are like a small sovereign state with different interest, stakeholder requirements and expectations. Thus, creating a risk culture based on scattered campuses, faculties and heads with different stakeholder interests can be a daunting task. Nevertheless, the main contributors to the required risk culture of an organisation are senior management by setting the tone at the top, prioritising and reinforcing the organisational culture (Barton & MacArthur, 2015). Therefore, when management is managing risk in a silo per campus it becomes challenging to integrate.

For the period under review 100% of universities incorporated requirement No 3.14, relating to monitoring and assurance on the effectiveness of risk management practices. South African universities monitored the effectiveness of their risk management practices and received independent assurance from both internal and external auditors. Additionally, monitoring, assurance and risk reporting on risk management revealed that 100% of sampled universities were incorporated in 2017 and 2015, respectively. Yet, in 2016 33% of sampled universities did not incorporate risk management reports or disclosed as per the requirement No 3.15.

Therefore, as discussed above, it can be said that South African universities met most requirements of level 4 risk governance maturity with few areas for improvement.

Figure 20 and Figure 21 below present the 2015 and 2016 comparison results respectively.

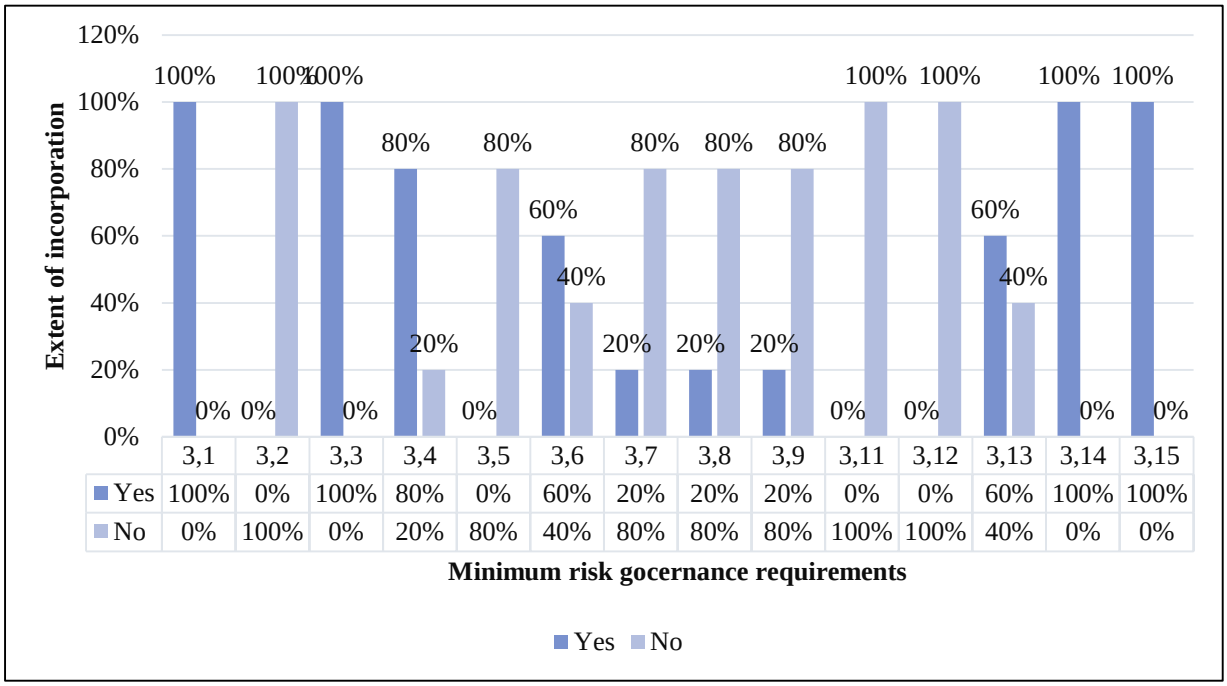


Figure 20 Risk governance Maturity Level 3 2015

Figure 20 presents the 2015 risk governance maturing results as discussed above for comparison.

Figure 21 represents the comparison figure for the years 2016 as discussed above.

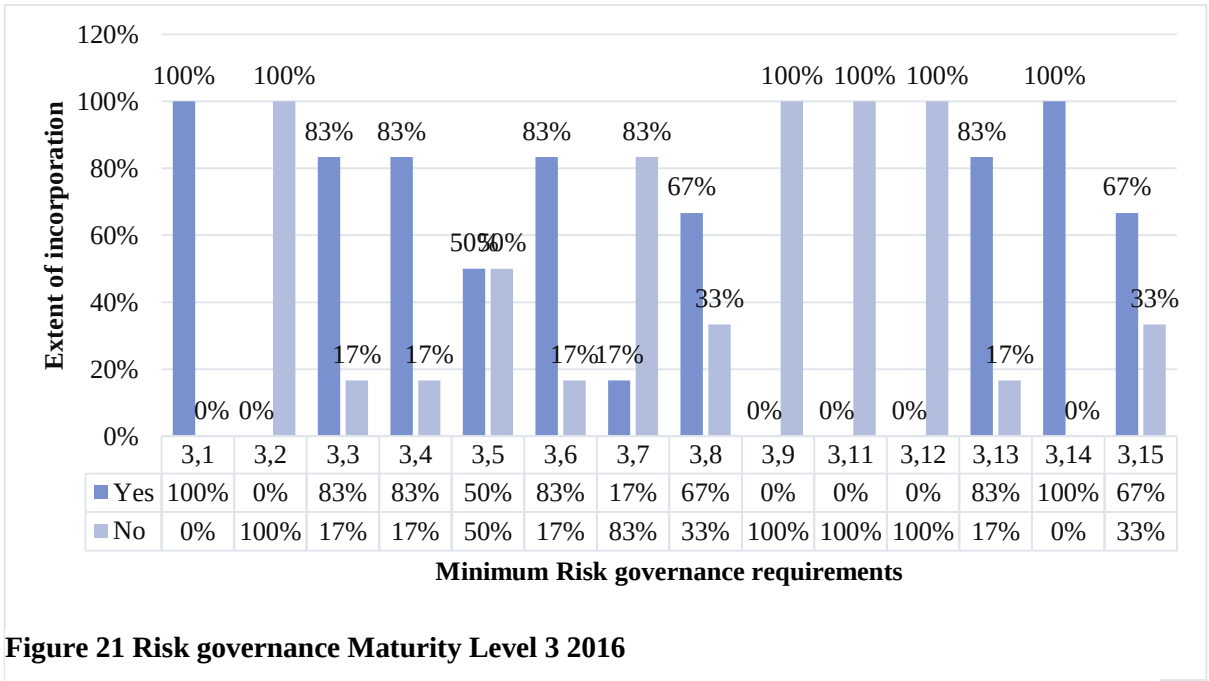


Figure 21 Risk governance Maturity Level 3 2016

Table 19 Risk governance Maturity Level 4 2017

			Minimum requirements Incorporated	
NO	**Levels of Maturity**	**Risk Governance minimum requirement per level**	**Yes % as per Total reports**	**No % as per Total Reports**
4.1	Level 4-Predictive	Risk management is embedded in the University as a whole.	50%	50%
4.2	Level 4-Predictive	A single view of risk across the organisation and risk management processes are institutionalised	100%	0%
4.3	Level 4-Predictive	All Business units drive implementation through risk owners/Risk Champions	83%	17%
4.4	Level 4-Predictive	Business continuity is established and implemented, testing and exercises are conducted using recovery strategies.	0%	100%
4.5	Level 4-Predictive	Risks are assessed and quantified periodically	17%	83%
4.6	Level 4-Predictive	Unexpected or unusual risk and risk taken outside the risk tolerance levels are identified and monitored	50%	50%

Table 19 above reflects on the results for risk governance maturity level 4 known as Predictive as an organisation shift from, not only integrating risk management to adopting a holistic approach that ensures a single perspective of risk management across the organisation. For the period under review, 50% of sampled universities incorporated requirement No 4.1 in 2017 relating to embedding risk management in the organisation as a whole, with 67% of sampled universities in 2016 and merely 20% of sampled universities in 2017. Some universities disclosed that there are still challenges with embedding risk management in the organisation as a whole and its processes. This could be due to HEIs presenting a challenge in implementing effective leadership due to anarchic structure that comprises departments, chairpersons, deans,

faculties which are like a small sovereign state with different interests, stakeholder requirements and expectations (Cloete *et al,* 2002).

Nevertheless, requirement No 4.2 relating to a single view for risk management and institutionalising risk management processes and it was incorporated by 100% of sampled universities in 2017, 83% in 2016 improving from 60% in 2015. This can be attributed to the adoption of the risk management framework, processes and created the right structure such as risk management committees for the implementation of effective risk management. This is supported by King IV (2016), the integrated COSO framework (2017) as both stresses, the importance of a holistic approach to risk management by ensuring risks are integrated and treat risk not only in a silo but rather in a wide-range approach by having a single view of risk across the organisation. According to NACUBO (2007) over the years there has been an increasing understanding of ERM as the process of holistic risk identification on a wide range of organisations, Furthermore, there is an increased focus on risk management as a whole and the adoption and application of an integrated risk management approach specifically (Robinson, 2007).

Concerning, requirement No 2.4 the sampled universities sustained 83% incorporation as they drove risk management implementation through risk owners. All risks were allocated to risk owners with faculties and divisions keeping their operational risk register and contributes to the universities' strategic risk registers. These risk owners were developing risk responses and implementing them as per requirement No 4.3.

One of the challenges faced by South African universities was the development of business continuity plans, implementation and testing for areas of improvement as per requirement No, 4.4 (IoD, 2016). The sampled universities did not develop and implement their contingency measures as discussed. In addition, one of the requirements for Predictive maturity is to assess and quantify risks as per requirement No 4.5. Nonetheless, 100% of the sampled universities did not incorporate the requirement in 2015, followed by 83% in 2016 and 2017 respectively. Universities have only assessed their risks and disclosed them qualitatively, as there was no disclosure regarding quantification, except 17% of the sampled in 2016 relating to financial rather than enterprise risks such as liquidity, credit risk, and price risk. The assessment and quantification of risk are supported by risk management frameworks such as the COSO framework (2016) and ISO 13000 (2009) as outlined that, organisations should

assess, quantify and priorities risk. In the South African context, King IV (2016) further states that the recommended practices should be applied and explained in the annual report.

According to a study by Moodley (2010) before the financial crisis, there was little attention being given to financial risks such as liquidity, price risk and credit risk. However, in recent years there has been increased attention to risk management and operation activities disclosures requirements as regulators are concerned about sustainability in the education sector. Accordingly, such important information should be disclosed in the annual report. COSO (2004) argues that management should possess a skill set of both quantitative and qualitative assessment techniques to assess its risk profile. Moreover, an annual report disclosure study in the USA, Canada and Germany has revealed that qualitative risk disclosure tends to be frequently compared to quantify, suggesting that organisations are scrambling to quantify risk exposure (Dobler *et al*., 2011).

Lastly, Predictive level 4 minimum requirements, requires the universities to develop risk appetites and tolerance levels in which risk would be monitored strategic decision within these acceptable levels. However, most universities that have not yet developed risk appetite consequential about 80% of sampled universities have not incorporated requirement No 4.5 in 2015, 100% 2016 and 50% of the sampled in 2017, which was an enhancement as it was advocated by King IV. Thus, some universities started incorporating the requirement. As discussed supra, the sampled universities incorporated some requirements of level 4 with some universities having challenges with embedding risk in the university as a whole.

South African universities are struggling with developing business continuity plans, implementing, testing the contingency measures for areas of improvement and the quantification of risk is not incorporated and disclosed. This can make it easy to develop risk tolerance level once quantified value at stake is established and universities can conduct risk vs benefit analysis when developing risk responses and monitoring on risk appetites and risk acceptable tolerance level.

As discussed above the comparison figure are presented in Figure 22 below for 2015 and 2016

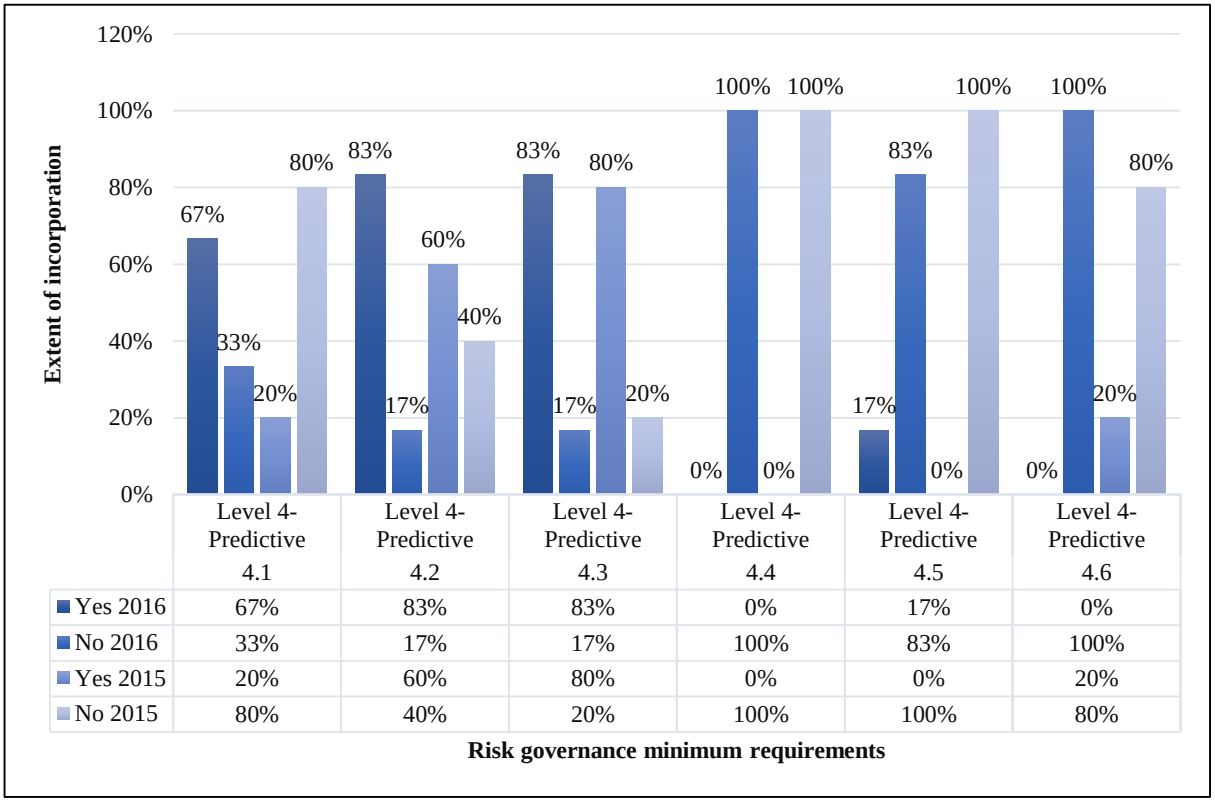


Figure 22 Risk governance Maturity Level 4 2015 and 2016

Figure 22 presents the comparison results as discussed above for 2015 and 2016.

			Minimum requirements Incorporated	
NO	**Levels of Maturity**	**Risk Governance minimum requirement per level**	**Yes % as per Total reports**	**No % as per Total Reports**
5.1	Level 5-Advanced	Risks are embedded strategic planning, capital allocation and in daily decision-making	100%	0%
5.2	Level 5-Advanced	Key risk indicators are established	0%	100%
5.3	Level 5-Advanced	Risks are linked to the strategic objectives	67%	33%
5.4	Level 5-Advanced	Risk root causes analysis is conducted		100%
5.5	Level 5-Advanced	Risk management practices are monitored, and areas of improvement are	67%	0%

		identified, and improvement are implemented		
5.6	Level 5-Advanced	Business continuity is developed, tested and lessons learned are recorded and improved for effectiveness.	0%	100%

Table 20 Risk governance maturity Level 5 2017

Shown in Table 20 above are the results for risk governance maturity level 5 known as Advanced, emphasising on embedding risk management in the strategic decision and linking with strategic objectives for sustainability and protect value leakage (IoD, 2016).

As indicated in Table 20, 100% of sampled universities embedded risk management in strategic planning and decision making in 2017, as they integrated risk management in decision-making. Likewise, strategic risk assessment was conducted to mitigate risks that threaten the achievement of strategic objectives and visions of the universities. This was an enormous improvement as it was 50% of sampled universities in 2016 and 80% in 2015. Moloi (2016) assessed, if management has ensured that risk is integrated into the day to day activities by South African universities, the study concluded that a 68% sample of universities embedded risk management compared in 2016 compared to 50% in 2016 as discussed above (Moloi, 2016). This is imputable to the difference in sample size and confirms the importance of risk management in the education sector, as these requirements are at advanced maturity level. This is the desired outcome as recommended by King IV and the ERM framework. South African organisations have shifted from treating risk in silo to enterprise wide view.

However, the challenge with assessing level 5 was requirement No 5.2 relating to establishing key risk indicators. This could not be assessed as there were no disclosures in the annual report resulting in 100% non-incorporation by sampled universities, for all the years under review. Besides, this could be conducted internally and not disclosed by the universities. The same can be said concerning root cause analysis as per requirement No 5.4, as no disclosures were made resulting in 100% of sampled universities not incorporating the requirement. It is important to note these requirements are quantitative, South African universities have challenges with quantification and not mature or have the resources to adopt as risk appetites and tolerance levels were also not defined.

Thus, PWC (2016) concluded that risk appetite statements should consist of both qualitative and quantitative elements; such as appropriate metrics that describe risk appetite levels,

tolerance levels and risk indicators. However, South African universities did not make disclosures as discussed above. These results supported a study by (Dobler *et al*., 2011) as asserted that qualitative risk disclosure is regular compared to quantitative, suggesting that organisations are struggling to quantify risk exposure (Dobler *et al.,* 2011). In addition, the results reflected that 60 % of sampled universities did not incorporate requirement No 5.3 in 2015, decreasing to 33% in 2016 and 2017, similarly. This requirement emphasises linking risk to strategic objectives. Additionally, even though risk assessments were conducted, some universities did not disclose their actual risk register or disclosed their risk assessment process. This decline is also revealed by the lack of assessment of opportunities presented by risk. Subsequently, to link risks with strategic objectives, the universities should assess opportunities and define their risk appetite to monitor that risks are taken with the acceptable level in pursuit of the defined objectives.

In 2016 and 2017, almost 67% of sampled universities monitored their risk management practices, identified areas of improvement and implemented improvements respectively, compared to 80% of the sample in 2015. As per Level 4 maturity discussed, one of the challenges faced by South African universities in the development, implementation and testing of business continuity plans, instigating 100% of sample universities not incorporating requirement No 56 for all the years under review, as universities have not developed their contingency plans and therefore, there were no disclosures related to testing for disruptions preparedness and outlining areas of improvement as per the lessons learned during the exercises or simulations.

As discussed above, South African universities incorporated some of the minimum risk governance requirements for Levels 4 and Level 5 with the highlighted challenges. Thus, it can be concluded that the risk governance of South African universities is mature beyond Nascent-level 1 and Emerging-level 2. The majority of the minimum risk governance requirements in Integrated -level 3 were incorporated, demonstrating that, risk governance is integrated and improving to other levels as the sampled universities have started incorporating the minimum risk governance requirements such as Predictive and Advanced levels. These observations confirm the assertions of Robinson (2007) that, there is an increased focus on risk management as a whole, and the adoption and application of an integrated risk management approach specifically. Organisations are shifting away from the traditional risk management approach which treats risk in a silo to an integrated approach (Dubihlela & Nqala, 2017).

It can be deduced that there is a lack of incorporation regarding development, implementation and testing of business continuity plans as 50% of sampled universities did not have these plans in place. According to ContinuitySA (2018), the strategic and future-oriented organisation develops contingency plans to recover its operations under volatile conditions. This is supported by King IV (2016) as emphasised on the development and implementation of business continuity plans. Hence, Moloi (2016) concluded that these universities were not prepared for events such as #Feesmustfall which utterly shifted their strategic objective and some universities were unable to resume operation due to the disruptions and complete the academic year.

Presented by Figure 23 are the comparison figures for the years 2015 and 2016 as discussed above.

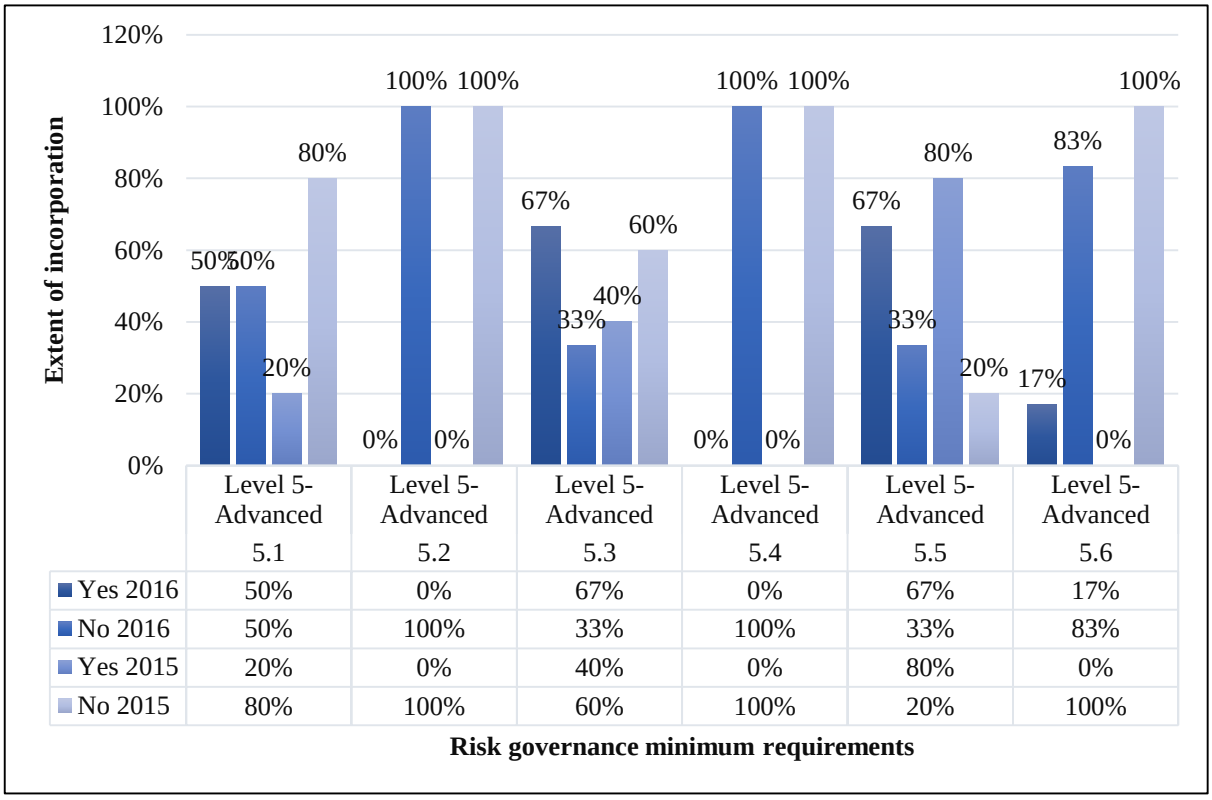


Figure 23 Risk governance maturity Level 5 2015 and 2016 comparison

Moreover, there were challenges with risk appetite adoption and incorporation, as it was noted that only 67% of sampled universities incorporated the requirement to govern and monitor risk within acceptable levels. Consequently, there is a lack of tracking on the unexpected and emerging risk taken outside the tolerance levels, as 50% of sampled universities did not incorporate tracking of unexpected risk or unusual risk taken outside tolerance level. This is due to tracking measures such as risk appetite, risk tolerance and risk indicator not

incorporated as yet. Paape and Speklé (2012) specified that risk appetite and risk tolerance are considered a key concept for risk management. Also, COSO (2004) asserted a preference for quantification and approval of risk appetite and tolerance levels. Nonetheless, South African universities have not fully incorporated the requirement.

Lastly, according to Andersen and Terp (2006) risk training and risk awareness workshops can assist an organisation to integrate risk in the culture of the organisation. However, training on risk management was not conducted by 80% of universities as per the annual reports. Confirming the conclusion by Moloi (2018) as asserted in the public sector that, organisations do not conduct risk training due to lack of relevant risk management qualification and skills by the governing body and the lack of risk management commitment to outsourcing the service.

4.3.5 CONCLUSION

This chapter intended to present data analysis and discuss the results on risk management practice disclosures and risk governance maturity levels by South African universities. The data collected using the Checklist was presented, analysed and discussed.

Concerning risk governance structure disclosure and King IV application, the results revealed that South African universities have disclosed information regarding their risk governance structure, as they have established risk governance structures such as audit or a standalone committee by means of a risk management committee. Nonetheless, some universities have not reformed their governance as recommended by King IV, which recommended that the audit or risk committee should be made up of both executive and non-executive members. With the majority being non-executive.

South African universities have applied and disclosed King I's risk management practices as applied by over 80% of sampled universities in 2017 and complied with the Higher Education Reporting Guidelines and the requirements of the Higher Education Act No101 of 1997 (Act no. 101 of 1997; IoD, 2016).

According to Moloi (2015), it does not appear as if, South Africa HEIs have embraced the idea of separate risk departments within their structures. It was noticed that they placed high reliance on the audit committee for risk management issues. According to Whyntie (2013), different board committees may make more layers of bureaucracy. A study was conducted between 2003 and 2011 to demonstrate that, having a separate risk committee is associated with high audit

fees (Hines, et al., 2015). Hence, some organisation prefers an audit committee that handles both audit and risk management issues. Nevertheless, King IV recognises both committees and does not outline separate risk committees.

About risk management practices disclosure and King IV application. The results revealed that there are still challenges t existed such as disclosures on the annual revision and approval of policies by the council as it has revealed a 67% disclosure by the sampled universities. Even though this recommended practice emanated from King IV in 2016. According to Akyar (2014), for an ethical environment to exist the board should frequently revise and approved policies and procedures to reflect on the actual practices and principles at the university. Moreover, it was noted that disclosure on risk appetite and risk tolerance level, though it has improved when compared to previous years. Thus far. It still showed that 50% of sampled universities did not disclose ascribed to 50% sampled universities not yet adopted the recommended practice. This is confirmed by Moloi (2015) as asserted that, the determination, monitoring of risk appetite and risk tolerance levels are of concern in South African universities as 95% of sampled universities were silent on these in their annual reports. These universities have not yet defined their risk appetite and tolerance level. Consequently, they are not compliant with King IV recommended practices and contradict the conclusions by Paape and Speklé (2012), as outlined that, risk appetite and risk tolerance is considered a key concept for risk management in ensuring unexpected risk taken outside tolerance level are monitored and reported.

The COSO (2004) also emphasised a preference of quantification and approval or risk appetite and tolerance levels to ensure that; the amount of risk the university is willing to take in pursuit of its strategic goal is outlined (IoD,2016). Additionally, this lack of risk appetite and risk tolerance is asserted by Dobler et al (2011) as concluded that, there is an increased qualitative risk disclosure compared to quantitative disclosure, suggesting that organisations are struggling to quantify their risk exposure.

Lastly, approximately 33% of the sampled universities obscurely disclosed practice No 2.6 as it consisted of few requirements. Notable, the lack of disclosure relating to the assessment of opportunities, business continuity arrangements, integrating risk management into daily activities and culture of the universities were the challenges to the non-disclosure.

South African universities adopted, applied and explained the King IV's risk management practices as applied by more than 80% of the sampled universities. This application can be

ascribed to the King code issuance on corporate governance in South Africa, especially the King IV "Apply and Explain" concept as it promotes risk management and qualitative disclosures. King IV further recommends outcome-oriented principles rather than a set of rules. Supporting the conclusions of Robinson (2007) as outlined, that there is an increased focus on risk management as a whole, the adoption and application of an integrated risk management approach, specifically. Additionally, the increased detailed disclosures compensate for the limitations of previous King codes and the lack of detailed disclosures on the actual risk management practices applied as highlighted by prior studies (Moloi, 2011; Moloi, 2014; Wilkinson, 2014).

Regarding risk governance maturity, the results revealed that South African universities governed risk by applying the minimum risk governance requirements as recommended by risk management maturity frameworks and the King IV recommended practices. In addition, it was observed that the sampled universities are mature beyond the Nascent and Emerging risk governance maturity level. As over 80% of the sampled universities incorporated the majority of the minimum risk governance requirements as per Integrated-level 3. This is attributed to some universities, which applied minimum requirements for Predictive level 4 and Advanced level 5. Similarly, for the Integrated-level, the majority of the minimum risk governance requirements are over 80% incorporation by the sampled universities.

Notwithstanding, there were challenges such as the adoption of risk appetite, which was incorporated by 50% of the sampled universities. Moreover, there is a lack of sufficient information or disclosure resulted in 100% of sampled universities not incorporating key risk indicators and cost vs benefit analysis for all risk response strategies. These challenges were also highlighted by Dobler et al., (2011). As discussed above, there is an increased qualitative disclosure with organisations struggling on quantitative disclosures as a result of a lack of quantification of risk exposure. Further confirmed by Moloi (2015) as highlighted that, the determination and monitoring of risk appetite and risk tolerance levels are of concern in the South African higher education sector as 95% of sampled universities were silent on the determination and approval of risk appetite and tolerance level.

One more lack of incorporation was about the development, execution and testing of business continuity plans as 50% of sampled universities did not have these plans in place. Even though they disclosed that they are considering developing contingency plans given the #Feesmustfall disruption.

According to ContinuitySA (2018) strategic and future-oriented organisation develops contingency plans to recover its operations under volatile conditions. This is supported by King IV (2016), which also emphasised through recommended practices the development and implementation of business continuity plans. This lack of business continuity plan was highlighted by Moloi (2015) as asserted that, most South African universities were not prepared for the #Feesmustfall disruptions as their risk management practices such as business continuity plans and emergency plans could not keep up with the student disruption. Thus, most universities found themselves not able to conduct final exams in 2015 as they could not recover their critical functions to operate under volatile conditions.

Risk appetite and tolerance levels were incorporated by 67% of sampled universities to govern risk. Resulting in unexpected and emerging risk not tracked by 50% of sampled universities. The lack of tracking on the unusual risk taken outside tolerance levels is attributed to the lack of risk appetite, tolerance levels and quantifications. Lastly, training on risk management was not conducted by 80% of sampled universities as per the annual report and 67 % of sampled universities were monitoring their risk management processes for effectiveness and received periodic assurance. According to Andersen and Terp (2006), risk training for risk awareness can assist an organisation with integrating risk in the culture in the organisation.

Therefore, it can be concluded that South African universities are at the Integrated-level of maturity improving to Predictive and Advance level of risk governance maturity. As some universities have started applying minimum requirements in level 4 and 5. Almost 67% of sampled universities were already linking risk with their strategic objective and vision. Moreover, 50% of sampled universities embedded risk management or looking at embedding into strategic planning, capital allocation and decision-making. Moloi (2014) highlighted that, there have been some better practices demonstrated by South African HEIs with regards to the day to day integration of risks to the university activities as well as embedding of risk management systems and practices by management to deliver on the council's strategy as 68% of South Africa's HEIs indicated that they practiced it.

The next chapter (Chapter five) provides the summary and conclusion of the research, discussing the relevance, implications and recommendations of the study, limitations as well as providing suggestions for future areas of study.

CHAPTER FIVE (5)

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The main aim of this study was assess the extent of risk management practices, disclosures and risk governance maturity of South African universities. The study used #Feesmustfall as a trigger event. This was also at the back of the introduction of King IV in 2016, which came with the "Apply and Explain" concept requiring organisations to disclose sufficient and relevant information for applied recommended practices for effective risk management. Furthermore, the study was motivated by the lack of research on the phenomenon of risk management in the education sector in the South African context to be specific. To achieve the above-mentioned aims, a Checklist was developed to assess using content analysis. The data gathered from the annual reports were presented, analysed and discussed in the previous chapter.

The purpose of this chapter is to give a summary of the major findings and draw conclusions on the risk management practices applied and explained and risk governance maturity by South African universities.

5.2 OVERVIEW OF THE STUDY

5.2.1 The research problem revisited

HEIs operate in a complex and rapidly changing environment that consists of societal, economic and the pressure to transform their business practices due to recent challenges with the potential to utterly shift their business model and strategic objectives. Consequently, events such as #Feesmustfall and demand for free education resulted in significant attention from stakeholders requiring information to make an informed decision on the sustainability of the HEIs (Moloi, 2015; Murtaja & Al-Wattar, 2016 Therefore, South African universities are required by the Higher Education Act No 101 of 1997 to adopt risk management practices to govern risk as per the reporting guidelines and implementation manuals.

Prior studies on risk management practice disclosures in the South African context highlighted a lack of detailed disclosures on the actual risk management practices applied to govern risk. This is attributed to the previous King codes being underpinned by the "Comply or

Explain" concept and King III with "Apply or Explain". Moreover, previous studies assessed the extent of disclosures using the previous King codes.

Thus, the lack of detailed disclosures as compliance and actual risk management practice disclosures were not required as long as the reason behind the non-application is provided to stakeholders (Moloi, 2014; Wilkinson, 2014; IoD, 2002; IoD, 2009; IoD, 2016). The well-anticipated King IV was issued in 2016 as the HEIs were faced with the disruptions, the newly revised King code consists of outcome-based rules for good governance. The "Apply and Explain" philosophy was introduced as organisations are, now required to apply the recommended practices and explain the application thereof, through annual report disclosure statements.

5.2.2 Identified gaps in the literature

Various previous research articles, dissertations and other literary material were consulted in establishing the extend of discourse and hence the gaps in literature. The review of literature revealed the following:

a) That most of the studies in the area were conducted outside South Africa. Therefore, generalising their findings in the South African context raises some questions due to the principles, policies and regulatory requirements.
b) That even though risk management is widely studied, it is still sparsely researched in the South African context. Literature revealed that, it is largely explored in the business sector within private business environment. Therefore, the applicability of its findings in the educational sector is questionable as the content for risk management and risk governance varies from industry to industry based on stakeholder expectation, compliance requirements, leadership and operational complexity.
c) Prior studies conducted on risk management disclosure and risk governance in the education sector were conducted before King IV issuance in 2016 and constructed based on the previous King codes. Consequently, some of these studies were dated to have been conducted more than five years ago and highlighted the lack of detailed disclosures on the actual practices applied due to the previous King codes version not using the "Apply and Explain". Hence, the organisation did not have to explain, how they applied the recommended risk management practices. So, using the findings of these studies to conclude on the adopted risk management practices and risk governance in the high education sector is questionable.

Due to the gap and the main research question outlined in the research problem above, the study was motivated to fill the gap using newly issued King IV, which acts as an implementation framework for good governance in South Africa to assess risk management practices disclosure and risk governance maturity in the South African education sector.

5.2.3 Research questions revisited

After the research problem was identified the main question that arises is: To what extent have South African universities applied and disclosed their risk management practices as per the King IV on corporate governance, and the Higher Education Act and how mature is their risk governance?

Thus, the main purpose of the study was to assess the extent of risk management disclosure, application, risk governance and maturity thereof, by South African universities. The main research question was split into specific research questions.

The specific questions that arise during the literature review and remained unanswered

- What are the risk management practices that could be adopted and applied by South African universities as recommended by King IV for effective risk management?
- To what extent have South African universities applied, explained and disclosed King IV's risk management recommended practices?
- What are the minimum risk governance statements requirements that could be incorporated as a proxy for risk governance by South African universities?
- How risks are governed by South African universities and risk governance maturity thereof?

Hence, research objectives were developed to answer the research questions above, using the methods below.

5.3 METHODOLOGICAL PROCEDURES FOLLOWED

The study adopted a qualitative content analysis approach to analyse the annual reports. The extent of disclosure and risk governance maturity was assessed using the developed Checklist, which was developed using King IV 's recommended practices and risk governance maturity frameworks.

The study was conducted in two phases:

Phase 1: a comprehensive review of prior studies, King codes, ERM framework and higher education reporting manuals was conducted to establish the applicable risk management practices and the minimum risk governance requirements that could act as a proxy for risk governance.

Phase two: the Checklist was developed using the established minimum risk governance requirements and King IV recommended practices and used to assess the annual reports of the sampled universities.

An exploratory research design was adopted for this study using constructive paradigms within deductive reasoning.

5.4 KEY RESEARCH FINDINGS

In this sub-section, the key findings are summarised in the context of the research objectives that guided this study. Each research objective is deliberated in line with how it was achieved.

5.4.1 Objective 1: King IV recommended practices

Regarding the first research question, "What are the risk management practices that could be adopted and applied by South African universities as recommended by King IV for effective risk management?". The objective was achieved, and the research question answered in phase one of the study by determining King IV's recommended practices as the best practices for effective risk management and enforced by the Department of Higher Education through the reporting guidelines and implementation manuals. The identified risk management practices were applied as a basis to develop the Checklist used in stage two of the study to assess the extent of application and disclosure.

5.4.2 Objective 2: Risk management practices disclosure

Concerning the second research question "To what extent have South African universities applied, explain and disclosed King IV's risk management recommended practices?". It is significant to note the study assessed risk management practices disclosure and concurrently assessed the extent of application as explained.
The research objectives were addressed as follows:

5.4.2.1 Risk governance structure disclosures

Concerning risk governance structure disclosure and King IV application, the results revealed that South African universities fully disclosed information regarding their risk governance structure, such as the audit committee or a standalone risk management committee to govern risk. Still, some universities have not changed their formation as recommended by King IV. South African universities disclosed their recommended practice as applied by over 80% of sampled universities and complying with the higher education reporting guidelines and the requirements of the Higher Education Act of South Africa No 101 of 1997 (Act no. 101 of 1997) and recommendation of King IV on disclosures (IoD, 2016).

According to Moloi (2015), it does not seem like South African HEIs have embraced the idea of separate risk departments within their structures. Notably, they placed high reliance on the audit committee for risk management issues. Whyntie (2013) reasoned that having different board committees may create more layers of bureaucracy. Moreover, a study was conducted between 2003 and 2011 demonstrated that having a separate risk committee is associated with high audit fees (Hines, et al., 2015). Therefore, some organisation prefers an audit committee that handles both audit and risk management issues.

5.4.2.2 Risk management disclosures

Annual revisions and approval of policies

The results revealed that there are still challenges related to disclosure such as the annual revision and approval of policies by the council. As it has shown a 67% disclosure by the sampled universities. Even though this recommended practice came with King IV in 2016. According to Akyar (2014), for the ethical environment to exist, the board should frequently revise and approved policies and procedures to reflect on the actual practices.

Defining risk appetite and tolerance levels

The results have shown that risk appetite and risk tolerance level establishment disclosures. Even though it has improved compared to previous years, still showed 50% of sampled universities did not disclose due to some universities not yet adopted the recommended practice. These challenges were also highlighted by Dobler et al., (2011) as asserted that, there is an increased qualitative disclosure with organisations struggling on quantitative disclosures as results of a lack of quantification of risk exposure. Moreover, Moloi

(2015) highlighted that the determination and monitoring of risk appetite and risk tolerance levels are of concern in the South African education sector as 95% of sampled universities were silent regarding these. These universities have not yet set their risk appetite. Thus, they are not compliant with King IV's recommended practices and contradict the study by Paape and Speklé (2012), which highlighted that risk appetite and risk tolerance are considered a key concept in risk management for ensuring unexpected risk taken outside tolerance level are monitored and reported.

Ongoing oversight to ensure effective risk mitigation

Notably, approximately 33% of the sampled universities obscurely disclosed practice No 2.6 as these practices consisted of few requirements. The challenges were the lack of disclosure relating to the assessment of opportunities, business continuity arrangements and integrating risk management into everyday activities and culture of the universities. The lack of risk integration into the culture is supported by Brewer and Walker (2011) confirmed that, even though universities increasingly recognise that effective management of risk is significant, their main focus has been on the prevention of risk from occurring and management of risk after the event. In addition, very few have integrated risk within their quality assurance regime or strategic planning. Further highlighting that risk culture starts with the board and management. Thus, risk culture should be part of the day to day operations and decision-making process, as organisations should embrace risk from the top to employee (Barton & MacArthur, 2015).

So, except for the challenges highlighted, it can be concluded that South African universities adopted the recommended practices and applied as most practices were applied by more than 80% of the sampled universities. This application can be ascribed to the King codes for corporate governance in South Africa. Especially the King IV “Apply and Explain” concept and the Department of Education reporting guidelines and implementation manuals (IoD, 2016). Confirming the conclusions of Robinson (2007), as outlined that, there is an increased focus on risk management as a whole and the adoption and application of an integrated risk management approach specifically. Addressing the challenges highlighted by previous studies on the lack of detailed disclosures on the actual practices applied due to the previous King codes.

5.4.3 Objective 3: Minimum risk governance requirements

This objective was developed to answer the research question "What are the minimum risk governance statements that could be incorporated as a proxy for risk governance by South African universities?"

The research objectives and research question were addressed in stage one of the studies when different governance and risk governance maturity framework were discussed to establish the minimum requirements to govern risk. It was established that good risk governance is dependent on factors such as organisational size, resource availability and overall corporate governance strategy. Therefore, for one to conclude on the minimum risk governance requirement, would have to establish modes of maturing as it is hard for organisations to exist without any form of governance protocol or compliance checklist

The following minimum requirements were established as extracted from Chapter 2 for risk governance and expanded into a checklist used to address Objective 4.

Figure 24 : Risk governance minimum requirements extract

It was established that the risk governance minimum requirements are a competency-based, as risk governance does not follow an organisational life cycle approach. Organisations need to continuously assess their risk management practices for gaps and areas of improvement. Moreover, an organisation that is recently been established with the right processes, structures

and policies for risk management in place, can mature beyond an organisation existed for decades without the right processes and structures in place to support governance.

Therefore, it can be concluded that South African universities have governance processes in place. Moreover, they govern risks by implementing the minimum risk governance requirements as per King IV and other ERM frameworks discussed. However, the implementation of these requirements to govern risk requires resources and the extent of implementation matures as more processes and structures are established. Therefore, this study, concurrently assesses, the risk governance maturity of these universities using the minimum requirements as discussed in Objective 4.

5.4.4 Objective 4: Risk governance maturity

About the research question "How risks are governed by South African universities and maturity thereof?" the research objectives were addressed using a Checklist by assessing, the extent of incorporation of the minimum risk governance requirements and concluded on the maturity level of the sampled universities.

The results revealed that South African universities governed risk by applying the minimum requirements as recommended by risk management maturity frameworks and King IV recommended practices. Nonetheless, some challenges were highlighted which could be caused by a lack of maturity on risk governance as mostly they were at higher levels of risk governance maturity:

- Adoption of risk appetite which was incorporated by 50% of the sampled universities. Supported by Moloi (2015) as outlined that, the determination and monitoring of risk appetite and risk tolerance levels are of concern in the South African education sector as 95% of sampled universities were silent on the determination and approval of risk appetite and tolerance level. Resulting in the lack of tracking of unexpected and emerging risk as 50% of sampled universities did not incorporate tracking of unexpected risk or unusual risk taken outside tolerance level. This is due to universities not yet established tracking measures such as risk appetite, tolerance levels and risk indicators.
- Moreover, the development, implementation and testing of business continuity plans was a challenge as 50% of sampled universities did not have these plans in place. Even though they disclosed that, they are considering developing them given the

#Feesmustfall disruption. This lack of business continuity plan was highlighted by Moloi (2015) when it was outlined that, most South African universities were not prepared for the #Feesmustfall disruptions as their risk management practices, such as business continuity plans and emergency plans could not keep up with the student disruption.

- Training on risk management was not conducted by 80% of the sampled universities

Therefore, it can be concluded that South African universities' risk governance is maturing as, the sampled universities mature beyond Nascent-level 1 and Emerging-level 2. Thus, it can allude that, South African universities are at an Integrated-level 3 and improving. Some universities are already applying risk governance requirements at Predictive Level 4 and Advanced Level 5. Consequently, 67% of sampled universities were already linking risk with their strategic objective and vision, and almost 50% of sampled universities embedded risk management or looking at embedding into strategic planning, capital allocation and decision-making.

Moloi (2014) highlighted that, there have been some better practices demonstrated with regards to the day to day integration of risks to the university activities as well as embedding of risk management systems and practices by management to deliver on the council's strategy, as 68% of South Africa's HEIs indicated that they practiced it. The results of the study and those of Moloi are further supported by Robinson (2007) as highlighted that, there is an increased focus on risk management as a whole, the adoption and application of an integrated risk management approach specifically, as an organisation shifting away from the traditional approach which treats risk in a silo and adopting an integrated approach to risk management. According to Jansen (2016), full adoption and disclosures are an evolutional as, they can be achieved over time and the status confirms the notion that risk management application and disclosures are dependent on various factors such as the size of the organisation, resource availability, governance maturity and commitment by management on ERM program. Thus, South African universities are improving with time as more King codes principles are applied to govern risk.

5.5. IMPLICATIONS OF THE STUDY

In this section, the results are discussed concerning research, managerial and policy implications

5.5.1 Research/theoretical implications

The topic of risk management has recently received significant attention from regulators and senior management of organisations around the world (Guimond *et al*., 2010; Aven, 2016). Such awareness of risk management has spread to HEIs as they are also affected by risk due to their recent challenges and complex environment. Therefore, this study contributes to the identified gap in empirical research on risk management, especially in the Higher Education sector by providing new insights into the application and disclosure of risk management practices in the education sector.

Moreover, the study provides an understanding of risk governance arrangements and maturity by South African Universities. That is unique as it is using King IV, in the South African context and the educational sector. Unlike prior studies that are either overseas, public or private sector or use King III.

Finally, the findings of this study are also of significance to academics who may replicate this exploratory study in other sectors, areas and even among larger companies to confirm the validity of the findings of this study. They could also adopt the research methodology and the Checklist. Also, set a foundation to assess the disclosures of King IV utilising other methods that are quantitative and cover a larger sample size.

5.5.2 Implications for practitioners

The findings of this study are significant in assisting risk practitioners and managers to better understand risk management requirements and disclosure perimeters within the higher education context. Furthermore, the study highlights the different approaches to assess risk governance maturity and the best practices to achieve continuous improving risk governance maturity. Therefore, practitioners can use the guidelines to assess their environment and develop their measures and criteria. Other risk practitioners, regardless of an industry can as well access and improve their disclosures, by using the Checklist as King IV only provide recommended practices and not the modes of maturity measure once adopted. The Checklist can be used as a completeness measure when drafting up risk management disclosures in the annual report.

5.5.3 Policy implications

The findings could be significant to the Department of Education, as it governs reporting requirements through the reporting manuals and implementation for HEIs. The department can identify gaps in the disclosures and application of the risk management practices to revise its reporting guidelines and implementation manuals. Moreover, the challenges and gaps identified in the reporting practices can be addressed by imposing certain transparent requirements on disclosures in the annual reports as even though the universities use the same guidelines and manuals, they report differently and at the discretionary of the specific institution.

Additionally, even though King IV is the main framework for governance including risk governance, noteworthy, there are shortcomings heightened as it only recommended practices to be applied for effective risk governance, without providing for criteria to measure the maturity of the applied practices and assess the completeness of disclosures (IoD, 2002; IoD, 2009; IoD, 2016; Coetzee *et al.,* 2010).

Thus, the Institute of Directors Southern African can use the gaps frequently highlighted by researchers and this study, to expand the scope to measure maturity as King Codes are the main framework for corporate governance and risk governance to be specific. It is important to note that King Code is non-legislative and is based on principles and practices. Therefore, to promote good governance and sustainability, the principles should be integrated into the companies' Act to enforce certain principles for good governance such as business continuity plans for sustainability.

5.6 RECOMMENDATIONS

South African universities should conduct the following:

- Review their risk management committee’s formation to ensure, it consists of both executive and non-executive members, with the majority being non-executive a. This will allow for objectivity and independence, accountability and effective risk management.
- Conduct annual revision and approval of policies and ensure that, they are disclosed in the annual report as that will be seen as promoting an ethical environment and accountability for risk governance foundation.

- To define their risk appetite and tolerance level in pursuit of strategic objectives and tracking of unexpected and emerging risk taken outside the predefined levels. These quantifications should be accompanied by establishing key risk indicators. Therefore, the risk taken outside these levels should be monitored and reported.
- Business continuity and contingency plans should be developed covering areas such as facilities, ICT and workforce failure, these plans should cover different scenarios which should be tested to identify areas of improvement. Consequently, when events such as #Feesmustfall take place, the universities will be prepared to operate under volatile conditions as business impact analysis is already conducted and tested to operate under crisis.
- Develop a corporate ERM culture. There are several good models, risk content and insights to be gained from the corporate sector. However, the bottom line and operating environment for universities are different and certain principles may not be transferable. Even though, the ERM risk management process and the associated tools may be standardised and applicable across sectors, the unique elements of the higher education sector mean that some adaptation will need to take place through commitment and endorsement of risk management by the council and management.

  Therefore, universities should create a culture that integrates risk management into operations and involves the different campuses and faculties from inception.

  Moreover, due to the different campuses and faculties, for universities to create risk awareness and culture, they should conduct risk management training on different campuses, rather than a centralised approach.
- To conclude, South African universities rely on the audit committee for risk management issues with some universities highlighting the appointment of risk managers. Therefore, this process should take place for better translation and implementation of risk management principles in the educational sector. These are critical positions in driving risk awareness across the organisation as equipped expertise.

5.7 LIMITATIONS OF THE STUDY

Although a detailed process was followed in designing the research methodology and performing the study, to ensure enough coverage and reduce potential limitations.
However, the following limitations have been identified:

5.7.1 Delimitations

Delimitations are choices made by the researcher to impose certain boundaries of the study due to resources, the scope and should be mentioned (Mitchell & Jolley, 2010). This study aims to explore the extent of risk management practice application as recommended by King IV, disclosure, risk governance and risk governance maturity. This study was delineated to South African. Therefore, generalising its results to other counties is questionable before results are examined using the Checklist. Additionally, the study focused on public-funded universities, thus, generalising its findings to private universities, which consist of different business models, funding and strategic objective are questionable.

Any HEIs that does not meet the predefined criteria were not selected to participants in this study. The selection criteria for the sampled universities consisted of the following:

- South African university and publicly-funded
- Falls with the traditional, comprehensive and university of technology categories
- Produced an annual report for the three years and made publicly available.

5.7.2 Assumptions

According to Theofanidis et al., (2019), these assumptions are outside the control of the researcher. Therefore, are assumed as true or at least plausible by both the researcher and the readers. Likewise, is important to note that, King IV is not a legislative or rule-based framework, rather recommends principles that are outcome-oriented. So, it is the responsibility of the council to decide on the application and disclosures. Besides, King IV is not prescribing any specific risk management framework to be adopted (IoD, 2016). According to the IASB Framework (IASB) (2007) "the objective of an annual report is to timely deliver important performance information, financial position and decisions taken that affect strategic objectives". The framework highlighted that the information contained in the annual report to be useful and adequate, it must be understandable, relevant, reliable and comparable.

For this study, the researcher worked on the assumption that the information disclosed in the annual reports represents the actual practices taking place at the university and relies on the transparency of the university towards stakeholders by disclosing accurate and complete information.

5.7.3 Limitations

Research Limitation can be defined as, the potential weaknesses and influences in a study that the researcher cannot control and place restrictions on the research methodology and conclusions. Furthermore, any limitation that influences the interpretation of the results should be mentioned (Simon & Goes, 2013). Hence, it can be said that all studies are subjected to influences, shortcomings and conditions regardless of the proposed contribution. These can influence the interpretation of the results, when not disclosed (Dubihlela & Nqala, 2017).
Limitation can be defined as potential weaknesses and influences in a study that the researcher cannot control and place restrictions on the research methodology and conclusions. Thus, any limitation that influences the interpretation of the results should be mentioned (Theofanidis et al., 2019)

5.7.3.1 Units of analysis

The study is only focusing on public-funded universities that fall within the traditional, comprehensive and university of technology categories in South Africa. Therefore, its conclusions cannot be transferred to other countries due to differences in legislation, governance requirements and operating environment. Moreover, the study is industry-specific, thus, the results may not be relevant nor generalised to other industries or private funded universities, which may require further studies to be conclusive.

5.7.3.2 Research method

The study conducts a content analysis using annual reports as published by the HEIs. Therefore, the information disclosed in the annual reports might not reflect the actual practices taking place in the institutions, as certain information might not be disclosed due to their sensitivity and being strategic. Additionally, the content analysis relies on the quality of the annual report disclosures. Thus, risk management disclosure might have been incomplete, resulting in omitting important information. It is important to note disclosure does not always mean application as the information disclosed, might only be for compliance purposes rather actual practice. Content analysis is labour-intensive and time-consuming, which could result in errors during the analysing, categorising and conclusion phases due to subjectivity and personal biases.

However, the researcher used one instrument to assess the variables over a period of 3 years for all sampled universities. For data consistency, a replicable process as discussed in Section 3.5.2.5 was followed.

5.7.3.3 Time limitations

As a result of the time-frame and constraints of the study, the use of non-probability and purposive approach. The sample may have been unrepresentative of the population. To address the limitation, the researcher ensured that, the variables are assessed over a period of 3 years and further ensured that, all university categories such as traditional, comprehensive and university of technology are evenly represented.

5.8. SUGGESTIONS FOR FURTHER STUDIES

The above-mentioned limitations of this study pave the way for suggestions for potential future research:

- The study only assesses the extent of disclosures by universities, a study can be conducted including colleges and private universities, which are not publicly funded to establish if the same conclusion can be reached by applying the same methods.
- The study was conducted using content analysis which is labour-intensive resulting 18 annual reports being assessed for the period under review, a future study can be conducted using a questionnaire and collect primary data from the universities as one of the limitations of using the annual report is the reliance on disclosure and working on the assumption that, what is disclosed represent actual practices at university. Therefore, primary data collection will address such limitations.
- This study used a qualitative approach, a study can be developed using the quantitative methodology or mixed methods to cover a larger population and draw possible inferences in risk management practices within HEIs in South Africa.
- Furthermore, it was noticed in the literature, that different arguments on the separation of audit and risk committee exist, with some authors stating that such a structure impacts on academic cost structure, creating unnecessary multiple structures. Therefore, a study could be conducted to test this hypothesis, as South African universities place high reliance on the audit committee for risk issues.

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APPENDIX A: Turnit –in Report

Inga Sityata

RISK MANAGEMENT PRACTICES, DISCLOSURES AND RISK GOVERNANCE MATURITY OF SOUTH AFRICAN UNIVERSITIES: AN ANNUAL REPORT DISCLOSURE ANALYSIS

ORIGINALITY REPORT

13%	9%	5%	3%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to University of Pretoria Student Paper	2%
2	Submitted to Institute of Graduate Studies, UiTM Student Paper	1%
3	Submitted to Laureate Higher Education Group Student Paper	1%
4	Submitted to Unicaf University Student Paper	1%
5	Submitted to Mancosa Student Paper	<1%
6	Submitted to University of KwaZulu-Natal Student Paper	<1%
7	icrhb.org Internet Source	
8	Submitted to North West University Student Paper	
9	Submitted to KCA University Student Paper	

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	On		

APPENDIX B: Language Editor's Certificate

Client: Inga Sityata

Title: *RISK MANAGEMENT PRACTICES, DISCLOSURES, AND RISK GOVERNANCE MATURITY OF SOUTH AFRICAN UNIVERSITIES: AN ANNUAL REPORT* DISCLOSURE ANALYSIS

Date: 17 August 2020

EDITING SERVICES CONFIRMATION

This is a confirmation that I have edited Inga Sityata's thesis for language and presentation

Kind Regards

BZN

Bea Ndlovu

MBA, CIA, CCSA, CRMA