

**ASSESSMENT OF ENTERPRISE RISK MANAGEMENT MATURITY
LEVELS OF THE INSURANCE INDUSTRY IN BOTSWANA**

By

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DEDICATION

This research is dedicated to my father Liko Ngwenya who has been my spiritual mentor for years. I dedicate this research to my husband Dumisani Dziva who gave me energy to complete this work. Finally, I dedicate the research to my three sons, Praise, Dumo and Andiswa. Andiswa especially managed to forgo some of the attention he deserved from a mother and patiently allowed me to complete the research.

DECLARATION

Student number: 49922114

I declare that **ASSESSMENT OF ENTERPRISE RISK MANAGEMENT MATURITY LEVELS OF THE INSURANCE INDUSTRY IN BOTSWANA** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references. I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.

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ASSESSMENT OF ENTERPRISE RISK MANAGEMENT MATURITY LEVELS OF THE INSURANCE INDUSTRY IN BOTSWANA



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22 September 2017

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ABSTRACT

The primary objective of this study was to develop an Enterprise Risk Management Maturity Framework (ERMMF) for use in the assessment of Enterprise Risk Management (ERM) maturity levels of the insurance industry in Botswana. The ERMMF incorporated elements from the Committee of Sponsoring Organisations of the Treadway Commission (COSO)'s ERM framework and the AON risk maturity model. Five criteria were utilised to define each of the eight components of ERM used to measure ERM maturity levels. The framework was developed qualitatively through literature review. The ERMMF was tested empirically to evaluate the ERM maturity levels of the insurance industry in Botswana. Data was collected from 12 respondents from long-term insurance companies, 15 from short-term insurance companies, 4 from reinsurers and 59 from brokerages.

The findings revealed that the whole insurance industry is at the Defined stage of ERM maturity level as the responses bordered around 3 on the developed scale of measurement. The findings implied that the insurance sector in Botswana has generally implemented ERM but not enough follow-ups had been made to ensure that ERM became a continuous process. Results further indicated that although the whole sector was at the defined stage of ERM, the responses in each component differed per stratum. Literature indicates that insurance organisations, regardless of stratum within which they are, are faced with similar risks generally. The differing responses could be due to the magnitude of risks that could differ according to unique characteristics of each stratum. The study further recommended an enterprise risk management implementation procedure for the insurance industry in Botswana.

It is recommended that the insurance industry in Botswana should take ERM as a continuous process for growth in ERM maturity levels. The insurance industry regulator is advised to make ERM reporting mandatory. This should benefit the insurance industry in Botswana while protecting the stakeholders.

Keywords: enterprise risk management, enterprise risk management maturity levels, ERM maturity framework, COSO ERM framework, ERM implementation procedure, insurance industry, short-term insurers, long-term insurers, reinsurers, brokerages.

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LIST OF ACRONYMS AND ABBREVIATIONS

AAA:	American Accounting Association
ACT:	Association of Corporate Treasurers
AICPA:	American Institute of Certified Public Accountants
AIRMC:	Association of Insurance and Risk Manager
ALARM:	National Forum for Risk Management in the Public Sector
APM:	Association for Project Management
BCBS:	Basel Committee on Banking Supervision
BRM:	Business Risk Management maturity
BRM3:	Business Risk Management maturity model
BSTIUA:	Botswana Short-term Insurance Underwriters Association
CAS:	Casualty Actuarial Society
CCO:	Chief Compliance Officer
CEIOPS:	Committee of European Insurance and Occupational Pensions Supervisors
CEO:	Chief Executive Officer
CERA:	Chartered Enterprise Risk Analyst
CGIAR:	Consultative Group for International Agricultural Research
CIMA:	Certified Institute of Management Accountants
COSO:	Committee of Sponsoring Organisations
CRO:	Chief Risk Officer
EIOPA:	European Insurance and Occupational Pensions Authority
ERM:	Enterprise Risk Management

ERMIP:	Enterprise Risk Management Implementation Process
ERMMF:	Enterprise Risk Management Maturity Framework
ESRB:	European Systemic Risk Board
FEI:	Financial Executives International
FERMA:	Federation of European Risk Management Associations
FSB:	Financial Stability Board
FSF:	Financial Stability Forum
G20:	Group of 20
HIV/AIDS:	Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome
HKIB:	Hong Kong Institute of Bankers
HM Treasury:	Her Majesty's Treasury
IAA:	International Actuarial Association
IACCM:	International Association for Contract and Commercial Management
IAIS:	International Association of Insurance Supervisors
ICP:	Core Insurance Principles
IFoA:	Institute and Faculty of Actuaries
IIA:	Institute of Internal Auditors
IMA:	Institute of Management Accountants
IMF:	International Monetary Fund
IRA:	Insurance Regulatory Authority
IRM:	Institute of Risk Management
ISO:	International Organisation for Standardisation

NBFIRA:	Non-Banking Financial Institutions Regulatory Authority
NII:	Net Interest Income
OCEG:	Open Compliance and Ethics Group
OECD:	Organisation for Economic Co-operation and Development
OGS:	Office of Government Commerce
ORSA:	Own Risk and Solvency Assessment
PESTLE:	Political, Economical, Social, Technological, Legal and Environmental (risks)
PwC:	PricewaterhouseCoopers
RBSS:	Risk-based Supervisory System
RIMS:	Risk and Insurance Management Society
S&P:	Standard and Poor's
SD:	Standard Deviation
SEC:	Securities and Exchange Commission
SME:	Small to Medium Enterprise
SPSS:	Statistical Product and Service Solutions
UNEP FI:	United Nations Environment Programme Finance Initiative
WTO:	World Trade Organisation

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Risk management is a relatively new concept for organisations worldwide in both the private and public sectors (Coetzee & Lubbe, 2013:45). The Chartered Enterprise Risk Analyst (CERA) (2013) maintains that when risk management became accepted by organisations in the twentieth century, risk managers were primarily responsible for managing 'pure' risks through the purchase of insurance. Companies viewed risks in silos representing a specific risk, such that they analysed each risk silo separately and developed unique strategies for each (CERA, 2013:1).

However, due to the global financial crisis that started in 2008, it has been observed that interest in enterprise risk management (ERM) has continued to grow. A considerable number of organisations are recorded to have implemented ERM programmes. Rating agencies have increased their attention in considering ERM in the rating process, while consulting firms have embraced ERM as part of their services package, and research centres have shifted their focus on it (Hoyt & Liebenberg, 2011:797). Enterprise Risk Management takes a holistic approach to risk management, emphasising on cooperation between all functions to manage the organisation's full range of risks as a whole. Its goal is to develop an inclusive corporate strategy for addressing risk, and requires companies not only to analyse each risk separately, but also to analyse the correlation of the various risks (CERA, 2013:1).

The ISO 31000 risk management standard requires an organisation to formalise management of risk in all processes in the organisation (ISO 31000, 2009b). Moreover, significant boards have sounded the need for all organisations to be alert to risks. The Financial Stability Board (FSB), which was established in 2009 by the Group of 20 (G20) leaders emphasises the need for global economic governance in agreement with

the World Bank, the International Monetary Fund (IMF), and the World Trade Organisation (WTO). Built on the structure founded by its predecessor, the Financial Stability Forum (FSF), the Financial Stability Board was established to coordinate at international level, the work of national financial authorities and international standard setting bodies to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies (FSB Charter, 2009). Such initiatives seem to have fuelled the need not only for urgent adoption of risk management processes, but also for continual monitoring of the performance of risk management systems as a global requirement.

Specifically concentrating on the banking sector, the Basel II (Basel Committee on Banking Supervision [BCBS], 2004) was introduced with the intention to amend international standards regulating how much capital banks were to possess to guard against the financial and operational risks they faced. Its rules intended to ascertain that there was a positive correlation between the risk that a bank was exposed to and the amount of capital the bank needed to hold to safeguard its solvency and economic stability. The third Basel Accord (BCBS, 2010) was later developed as a solution to the shortcomings in financial regulation uncovered by the financial crisis of 2008. It is aimed at strengthening bank capital requirements by boosting bank liquidity and reducing bank leverage.

Purported changes in the global insurance industry apparently have significant implications for the usefulness of insurance companies' current risk management roles. The global changes, which are not unique to the insurance industry, are experienced as a way of responding to a wide range of uncontrollable forces. The situation has created a need for a sound regulatory and supervisory system that will protect the stakeholders of the industry (International Association of Insurance Supervisors [IAIS], 2011:2). Solvency II (2007) has strived to harness risks faced by the industry by introducing a risk-based system that determines the capital requirements of an organisation in a systematic, predetermined way. Like its equivalent, Basel III, it emphasises the alignment of capital requirements with the risks to which the company is exposed. IAIS

(2015) passed insurance core principles, standards, guidance and assessment methodology to benefit mainly insurance supervisors to ensure adequate upholding of risk management principles within the insurance industry. These are further discussed in Section 3.2.

In Botswana, the Non-Banking Financial Institutions Regulatory Authority (NBFIRA) confirms that several organisations in the insurance industry have, in one way or another, implemented enterprise risk management to fulfil regulatory requirements. According to NBFIRA (2015) the insurance industry is currently undertaking the rigorous process of ensuring that risk management is practiced, as the regulator is tightening its regulatory objectives. The insurance industry regulator in Botswana has seen the need to apply insurance prudential rules and a risk-based supervisory model to promote management of risks within the industry (NBFIRA, 2015). This is after the realisation that the insurance organisations have endeavoured to adopt ERM although they have not yet reached the desired levels of maturity in ERM (NBFIRA, 2014). The Insurance Bill (Botswana, 2014) was also intended to assist with the tools to monitor management of risks in the industry. The aim of the bill was to provide for all the detailed processes and duties relating to the insurance industry, and thus to assist NBFIRA in its regulatory role in the insurance industry. The regulatory body embarked on a rigorous exercise of implementing the risk-based supervisory system (RBSS), the key action being the establishment of the risk profiles of all its regulated entities (NBFIRA, 2014). These efforts confirm the need to assess the level of ERM maturity in the insurance industry.

The purpose of this study was to develop an Enterprise Risk Management Maturity Framework (ERMMF) for use in the assessment of ERM maturity levels of the insurance industry in Botswana. The results from the assessment will inform NBFIRA, as the insurance industry the regulator, of the preparedness of the insurance industry for the RBSS. All loopholes were identified so that players in the insurance industry can be assisted in the implementation of ERM.

1.2 Brief overview of existing literature

A literature review was conducted to provide a theoretical base for the study. In this section, the definitions of risk, risk management and ERM are outlined. Following the definitions, existing risk management-related standards, frameworks and models are considered as a background to the study and basis of synthesis of the ERMMF. Moreover, this review of literature assisted to trace the direction of the study.

1.2.1 Risk

Although the subject of risk management may have been prevalent in the ancient era, as shown in the Egyptian tomb paintings from 3500 BC, Bernstein (1998) emphasises that it was not until the Renaissance that a statistical basis for gambling was presented. Despite these earlier developments, Crowford (1982) and Williams and Heins (1995) assert that risk was not formally defined until just in the 1950s. Greene and Serbein (1983:24) and Valsamakis, Vivian and Du Toit (2010:28) contend that since risk is contextual, no single definition meets all the possible meanings of risk. One of the earliest definitions saw risk as a combination of hazards measured by probability (Pfeffer, 1956:42). Athearn and Pritchett (1984:4–5) define risk as a condition in which loss or losses are possible and their definition, to an extent, converges with Pfeffer's (1956) definition. Later Sayers, Gouldby and Meadowscroft (2002:36–42) defined risk as the probability of loss or undesirable outcome which depends on hazard, vulnerability and exposure. A comprehensive definition would capture key elements identified by the definitions above; potential for loss, caused by events and leading to company failure to achieve objectives. The researcher adopted the definitions provided by the Institute of Internal Auditors (IIA) (2004), ISO Guide 73 (2009a), and the Institute of Risk Management (IRM) (2010), which describe risk as a combination of the probability of an event and its consequences, or the effect of uncertainty on objectives, and note that in all types of undertaking there is the potential for events and consequences that constitute opportunities for benefit (upside) or threats to success (downside).

The insurance industry is commonly faced with insurance risk, credit risk, interest rate risk, market risk, liquidity risk, strategic risk, reputation risk and operational risk, inter alia (Insurance Regulatory Authority [IRA], 2013; Mpofu, De Beer, Nortje & Van de Venter, 2010:5–6). As such, any insurance industry is expected to guard against the listed risks through utilisation of ERM.

The Insurance Regulatory Authority (IRA) of Kenya (2013) defines insurance risk as the kind of risk that an insurer is exposed to as a result of insufficient or unsuitable reserving, underwriting, claims management, reinsurance, pricing and product design consequently leading to financial loss and the subsequent incapacity to sustain its obligations.

Product design encompasses the initiation of an insurance product to the market or the augmentation of a current product (IRA, 2013:9). It is recommended that an organisation looks out for risks associated with the undertaking.

Pricing comprises approximation business income and expenditure, and risks will arise at the inaccuracy of the estimations thereof (Kotreshwar, 2007:102).

Underwriting is the procedure that enables an insurer to decide whether to accept a risk, the contract terms and conditions and the premium to be charged (Gupta, 2007: 49). The insurer faces the risk of making a wrong decision if due diligence is not taken.

Reserving involves the relevant evaluation of insurance liabilities and thus promoting the financial soundness of the organisation (IRA, 2013:10). Inadequacies in the evaluation are expected to lead to the risk of failure to meet obligations by the organisation. Another risk arises when identifying a reinsurer to whom insurance business is ceded. When selecting a reinsurer, an insurer has to conduct adequate due diligence before engaging such reinsurer (IRA, 2013:9). Finally, an insurer's claim management process must be strong to avoid the risk of failure to fulfil its contractual responsibilities to policyholders (IRA, 2013:10).

Reputational risk relates to the response of the corporate image and brand to new information about the organisation (Deloitte, 2014a: 3).

Operational risk is the risk of loss consequential to failure of internal processes, people and systems, or to peripheral events, while **market risk** is created by market pricing and evaluation of assets which affect the organisation (Dun and Bradstreet, 2007:13-15). Credit risk concentrates on forecasting and determining the probability of non-payment and the effect this will have on the loan given (Dun and Bradstreet, 2007:16). Interest rate risk comes as a result of unforeseen changes in the market interest rate on the net interest income (NII) of the organisation (Vijayaragavan, 2013:153). Liquidity risk of insurance companies arises from an organisation's failure to meet its liquidity needs, as and when they emerge, without incurring undue costs (Bhattacharya, 2010:10). Also and Desheng (2007) define strategic risks as risks that are associated with the extent to which an organisation has a formal process to identify how potential changes in markets, economic conditions, regulations and demographic changes affect business.

1.2.2 Risk management

Risk management, loosely defined, is the art and science of managing risks (Valsamakis et al., 2010:2). The Institute of Internal Auditors (IIA) defines risk management as a process to identify, assess, manage and control potential events or situations to provide reasonable assurance regarding the achievement of the objectives of the organisation (IIA, 2004:55). The definitions connote that risk management is a systematic effort important for the achievement of organisational objectives. A good risk management programme therefore is consistent with the existence of any organisation as it entails the achievement of risk-to-return trade-offs (Valsamakis et al., 2010:7). Most codes of corporate governance, boards and committees, including the Committee of Sponsoring Organisations of the Treadway Commission (COSO) (2004), the Organisation for Economic Co-operation and Development (OECD), Basel III, Solvency II and the King IV Report on Governance, emphasise that risk management is indispensable. Nonetheless, traditional risk management alone appears to leave out

some important aspects, which led to the development of ERM defined in the following section.

1.2.3 Enterprise risk management (ERM)

ERM is a rigorous and coordinated approach to assessing risks and responding to all risks that affect the achievement of the strategic and financial objectives of an organisation (Alviunessen & Jankensgard, 2009). COSO, in their ERM-integrated framework, expansively defines ERM as a process effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite and to provide reasonable assurance regarding the achievement of entity objectives (COSO, 2004:4). This comprehensive and broad definition establishes ERM as a process (and not a one-off event), which involves the whole organisation – people at every level. Evidently, through ERM, entities are empowered to identify risks and to formulate risk management strategies, which provide reasonable assurance to the entity's management and board of directors that the objectives of the organisation will be met.

Eight components of ERM as elucidated by COSO (2004) formed the foundation of this thesis, namely internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring. The ERM framework is made to achieve an entity's objectives, namely strategic, operational, reporting and compliance objectives.

Many organisations have adopted ERM due to a combination of factors, such as pressure from corporate governance bodies and regulatory institutional demands (Alviunessen & Jankensgard, 2009:12). There are also additional factors such as globalisation, industry consolidation, regulation and technological progress (Hoyt & Liebenberg, 2011:797). Several researchers have furthermore substantiated the conclusion that adoption of ERM leads to shareholder wealth maximisation (Alviunessen & Jankensgard, 2009:13).

1.2.4 ERM maturity levels

Since ERM is not an event but a process, it is anticipated that organisations differ in maturity level of its application. It is expected that an organisation might be advanced in some of the eight components of ERM but not in others. Ciorciari and Blattner (2008:8) emphasise that weakness in one component could cripple the whole organisation. The current study wanted to prepare an ERMMF that would be used to assess maturity levels of the insurance industry in Botswana. The components that were employed were described by COSO (2004) and are reflected in the paragraphs that follow.

1.2.4.1 Internal environment

The internal environment encompasses the tone of an organisation, and sets the basis of how risk is viewed and addressed by the personnel of the entity, including risk management philosophy and risk appetite, integrity and ethical values, and the environment in which they operate.

1.2.4.2 Event identification

Internal and external events affecting achievement of the objectives of the entity must be identified, distinguishing between risks and opportunities. Opportunities are channelled back to management's strategy or objective-setting processes.

1.2.4.3 Objective setting

Objectives must exist before management can identify potential events affecting their achievement. ERM ensures that management has a process in place to set objectives and that the chosen objectives support and align with the mission of the entity and are consistent with its risk appetite.

1.2.4.4 Risk assessment

Risks are analysed, considering likelihood and effect, as a basis for determining how they should be managed. Risks are assessed on an inherent and a residual basis.

1.2.4.5 Risk response

Management selects risk responses – avoiding, accepting, reducing, or sharing risk – developing a set of actions to align risks with the risk tolerances and risk appetite of the entity.

1.2.4.6 Control activities

Policies and procedures are set up and implemented in a way that ensures that the responses to risk are effective.

1.2.4.7 Information and communication

Relevant information is identified, captured and communicated in a form that enables people to carry out their responsibilities. Effective communication also occurs in a broader sense, flowing down, across and up the entity.

1.2.4.8 Monitoring

The entirety of ERM is monitored and modifications made as necessary. Monitoring is accomplished through ongoing management activities, separate evaluations, or both.

1.2.5 COSO model as basis for the development of the ERMMF

Several standards and frameworks are discussed in section 3.2 of this thesis culminating in the justification of choice of the COSO framework for use as foundation for development of the proposed ERMMF. The risk management standard developed by the Association of Insurance and Risk Manager (AIRMIC), The National Forum for Risk Management in the Public Sector (ALARM) and the Institute of Risk Management (IRM) was analysed with the British standard (BS31100) and ISO31000 leading to the conclusion that most of them lack detail that COSO covers. Solvency II is further encapsulated. The paragraphs below compare the COSO framework and Solvency II thereby justifying why COSO was used in this research and not Solvency II, which is, in fact, customised for the insurance industry (See Solvency II, 2007) and was developed after the COSO framework.

This study employed the COSO ERM framework as a basis for the proposed ERMMF due to its perceived simplicity and comprehensiveness (Landsitte & Rittenberg, 2010:457). While the study did acknowledge that Solvency II, which was developed three years after the COSO model, is comprehensive and reflects key performance measures that determine continuity of insurance organisations, (Aon, 2014) and Deloitte (2015) highlight that Solvency II (2007) does not come without challenges. The Solvency II standard formula calculation has been viewed as complex, and demanding a voluminous input data and several separate calculations, some of which are repetitive in nature (Deloitte, 2015). Solvency II is often seen as a regulatory burden for players in the insurance industry (Aon, 2014), especially as it appears that several national regulators have not defined their customised approach to the implementation of Solvency II. The outcome of its 'equivalency' or 'proportionality' is not well understood by both regulators and the regulated (Deloitte, 2015:4–5). This has raised concerns, especially with big insurance companies in developed countries, owning subsidiaries in developing countries (Aon, 2014:3–5; Deloitte, 2015:4–5). Solvency II has further been associated with overburdening documentation requirements (Vienna Insurance Group, 2015:21).

The researcher chose to use COSO which, although is not without challenges, is simpler than solvency II and yet comprehensive, containing several qualitative processes outlined in Solvency II such as the importance of the role played by the board, reinforcement of internal controls and monitoring the risk management process (Solvency II, 2007). Upon comparing COSO with other relevant frameworks and standards (see 3.2), the researcher concluded that COSO's ERM components were comprehensive and simplified enough to form the backbone of the proposed ERMMF. Such a framework would be appropriate for the insurance industry in a developing country like Botswana.

1.2.6 Enterprise risk maturity models

Coetzee and Lubbe (2013) take a stance that ERM models are requisite in risk management. Attention should be invested in the development of a comprehensive risk

maturity model to ensure the credibility of the results obtained from the use of the model. To develop such a dependable model requires benchmarking with global standards so that it can be confidently used within the global risk management environment at large and hence gain the confidence of the governing bodies and management. Several models were analysed and are discussed for the synthesis of an appropriate model for use in this study.

The **capability maturity model** developed in the 1980s by the Software Engineering Institute (SEI) in the United States of America to measure information technology maturity seems to have formed the basis for most risk maturity models that were developed thereafter. The capability maturity model has five levels: initial, repeatable, defined, managed and optimising (Paulk, Curtis, Chrissis & Weber, 1986:6). The application of this model was found limited to organisations involved in software development processes (Hillson, 1997:36).

The **risk maturity model** by Hillson (1997) suggests that the approach towards risk management by organisations can be categorised into groups ranging from those with no formal process to those which have fully integrated risk management into the business. Hillson (1997) therefore came up with four levels of risk maturity: naïve, novice, normalised and neutral, in the order of lowest to highest. The components used by this model are culture, process, experience and application (Hillson, 1997:35–45).

The **project risk maturity model** (RMM), which was first developed by HVR Consulting Services in 1999 was directly derived from Hillson's structure but only afterwards tailor-made for projects (Hopkin, 2010:16).

Another model that was meant to benchmark organisational performance was the **business excellence model** from the European Foundation for Quality Management (EFQM) which, like the capability maturity model, focused on capability, maturity and business excellence (EFQM, 2013). The model does not specifically assess levels of risk management maturity.

The **business risk management maturity model** of the International Association for Contract and Commercial Management (IACCM) was developed to address the question of how an organisation could evaluate, in a quantifiable fashion, its level of maturity in business risk management (BRM). It identifies four levels of organisational competence in business risk management: novice, competent, proficient and expert ranked from lowest to highest level. Competence is measured by four attributes: culture, process, experience and application (IACCM, 2003:4), just as in the Hilson model (1997). The researcher deemed this model as not encompassing all possible risks with which an organisation is faced.

The Risk and Insurance Management Society (RIMS) introduced another risk maturity model in 2006 to help organisations to specifically better utilise ERM (RIMS, 2006). It is meant to help in planning, implementing, and benchmarking ERM within organisations. The model has five maturity levels: ad hoc, initial, repeatable, managed and leadership. Seven attributes are used by this model: adoption of ERM-based approach, ERM process management, risk appetite management, root cause discipline, uncovering risks, performance management, and business resiliency and sustainability (RIMS, 2006). While this model focused on ERM, the researcher deemed the maturity levels as not clearly defined.

The Aon risk maturity model, which was developed in 2010, has five maturity levels: Initial/Lacking, Basic, Defined, Operation and Advanced (Aon, 2010). The model uses nine attributes: board-level commitment, a dedicated risk executive in a senior level position, risk management culture that encourages full engagement and accountability, engagement of all stakeholders, transparency of risk communication, integration of risk information into decision-making, use of sophisticated quantification methods, identification of new and emerging risks, and risk management focused on extracting value (Aon, 2010). Some of the models have been depicted in Table 1.1, which summarises the levels and attributes of ERM maturity models. These will be discussed in more detail in Section 3.4

Table 1.1: Levels and attributes of risk maturity models

Model	Levels	Attributes
Hillson (1997)	Naïve Novice Normalised Neutral	Culture Process Experience
Hopkinson (2000)	Naïve Novice Normalised	Management Risk identification Risk analysis Risk control Risk review
Chapman (2006)	Initial Basic Standard	Culture System Experience Training management
Aon (2010)	Initial/lacking Basic Defined Operation Advanced	Board-level commitment A dedicated risk executive in a senior-level position Risk management culture that encourages full engagement and accountability Engagement of all stakeholders Transparency of risk communication Integration of risk information into decision-making Use of sophisticated quantification methods Identification of new and emerging risks Risk management focused on extracting value

Source: Wieczorek-Kosmala (2014:141).

Because of the relevance of Aon model's to the study and as a result of the comprehensive nature of the model, the study adopted some of the assumptions of the model for the development of the ERMMF. Furthermore, the model incorporates several elements from existing ERM models and standards and is basically applicable to all industries (Aon, 2010). Models are compared in more detail in Section 3.4.

1.3 Statement of the problem

ERM has been viewed as indispensable by various supervisors and boards. International Financial Reporting Standards, the Basel III requirements for banks and their subsidiaries, anti-money laundering regulations, and Solvency II have shown a prominent presence insofar as risk management is concerned (Public Risk Management Association, 2010:2). Insurers, like most organisations, are identified to be setting up separate risk committees of boards and assigning overall management responsibility for ERM to a chief risk officer (CRO) who is accountable to the chief executive officer (CEO) or the board of directors of the insurance company (Laeven & Perotti, 2010:8).

Although formal risk management is considered to be relatively new in the insurance industry, it is visibly gathering momentum and thus enabling companies to determine at which stage of ERM maturity levels they are. Many insurer boards of directors in both developing and developed nations have adopted formal systems of responsibility for risk management (American Academy of Actuaries, 2013:4).

Requirements for more transparency imply the need for more sophisticated risk information and reporting. This has generated the need for insurers to establish ways in which they can more quickly, accurately, and completely aggregate, analyse and report risk information (IAIS, 2015:4; PricewaterhouseCoopers [PWC], 2008). The above statements indicate that insurers are now required to adopt ERM and report the level of ERM to the relevant stakeholders. Organisations are envisaged to shift from siloed reporting of financial, actuarial, risk and compliance information to a more holistic

reporting approach. This study therefore sought to develop an ERMMF and hence assessed the ERM maturity level of the insurance industry in Botswana.

1.4 Objectives of the study

This thesis has one primary objective and four secondary objectives as indicated in Sections 1.4.1 and 1.4.2.

1.4.1 Primary objective

The primary objective of the study was to develop a proposed ERM framework to assess ERM maturity levels of the insurance industry in Botswana.

1.4.2 Secondary objectives

The secondary objectives of the study were as follows:

- to provide a literature overview to prepare an ERM framework to assess the ERM maturity levels of the insurance industry in Botswana;
- to evaluate the ERM maturity levels of the insurance industry in Botswana empirically;
- to establish whether there were differences in responses among different strata within the insurance industry in Botswana; and
- to recommend an ERM implementation procedure for the insurance industry in Botswana.

1.5 Research questions

Research questions are as outlined below:

- Which criteria could be used in the development of the ERMMF?
- What are the ERM maturity levels of the insurance industry in Botswana?
- How do the responses among different strata within the insurance industry compare?

- Which ERM implementation procedure could be used by the insurance industry in Botswana?

1.6 Conceptual framework of the research process

This chapter is part of the whole research process conceptual framework. Figure 1.1 gives a representational overview of the research framework.

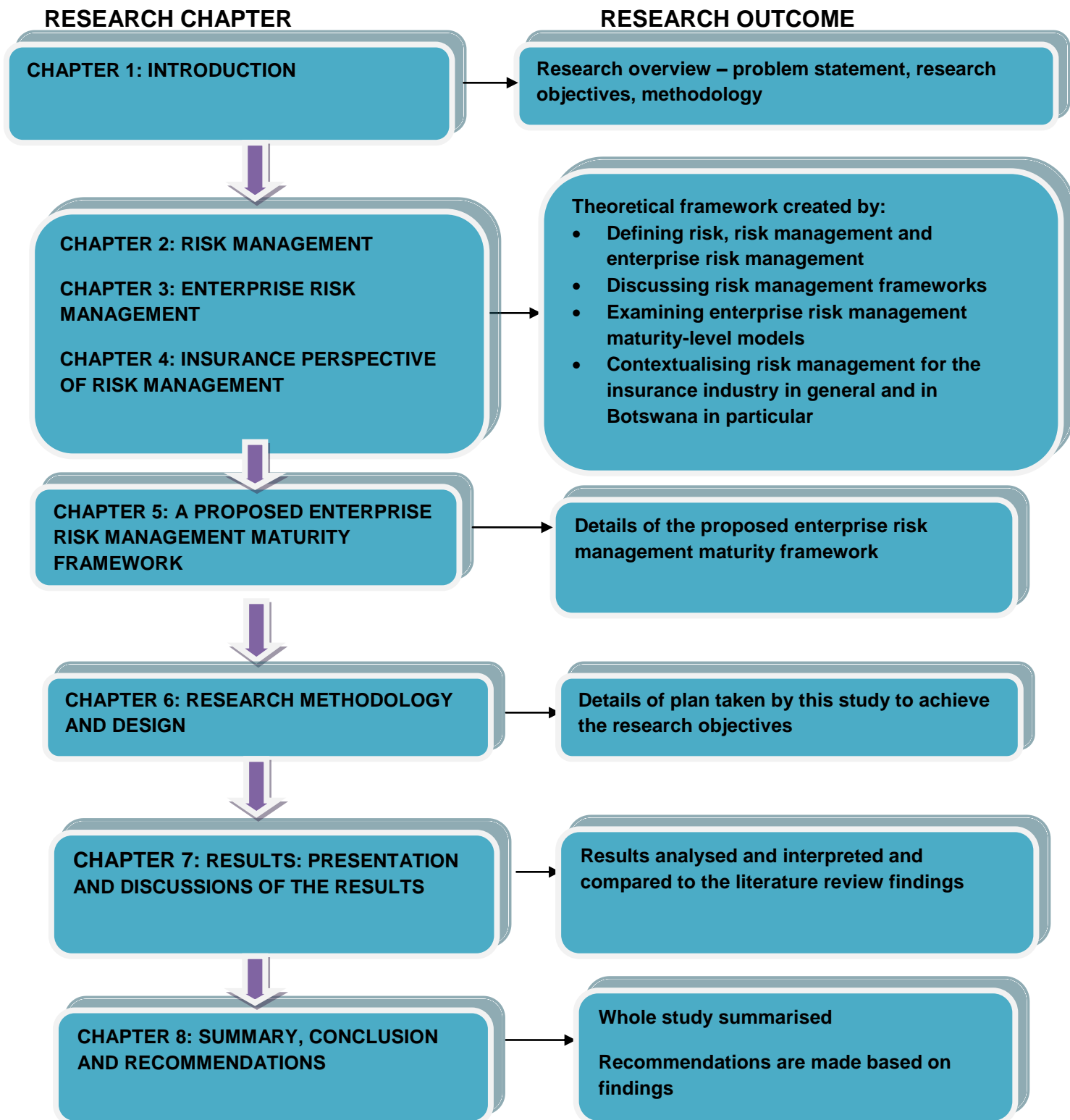


Figure 1.1: Research framework

Source: Researcher's own compilation

1.7 Research methodology

This section provides an overall summary of the research methodology used in this study. The research methodology will be discussed in full in Chapter 5.

Research methodology refers to the overall approaches and perspectives to the research process, and is concerned with why certain data was collected, the data that was collected, where it was collected and how it was collected and analysed (Appannaiah, Reddy & Ramanath, 2010:42–43).

1.7.1 Research design and paradigm

A research design gives the overview of the research methods and procedures to be used to collect and analyse data (Weaver & Olson, 2006:460). A paradigm, on the other hand, is a broad view or perspective of something (Taylor, Kermode & Roberts, 2007:5). Paradigms are arrays of principles and practices that synchronise investigation within a discipline by providing landmarks and procedures through which research is accomplished (Weaver & Olson, 2006:460). The paragraphs below explain the research design and paradigm in detail.

Research can be qualitative, quantitative or both. Qualitative research is portrayed by its objectives, which convey the understanding of some characteristic of societal life, and its approaches which generally produce words, and not figures, as data for analysis. (Neil, 2007:3–4). Quantitative research is a prearranged, unbiased and methodical procedure in which statistical data is used to get information about the world (Bryman & Bell, 2007:11). The current study was both qualitative and quantitative in nature as literature was reviewed and data collected and analysed statistically to reach conclusions.

Most quantitative research literature identifies three primary types of research:

- exploratory – research on a notion, people or situation about which the researcher knows little;

- descriptive – research on a notion, people or situation about which the researcher has knowledge, but intends to describe according to the observations made about the subject; and
- explanatory – encompasses testing a hypothesis and deriving that hypothesis from available theories (Appannaiah, et al., 2010:44).

The current research was descriptive in nature as it assessed the ERM maturity levels of the insurance industry using the developed ERMMF.

1.7.2 Data collection

Data collection involves obtaining facts that do not lead to the conclusion on their own but which provide the basis for forming the conclusion (Raiyani, 2012:65). Data can be divided into primary data and secondary data. Primary data, which is collected by the researcher, is original in nature while secondary data is that which has already been collected by others for other purposes but is useful to the researcher (Bhattacharyya, 2006:52).

Primary data can be collected through observation, experimentation, questionnaires, interviewing and the case study method (Bhattacharyya, 2006:53). This study relied on primary and secondary data. While secondary data came from the review of literature used for the development of the ERMMF and the proposed ERM implementation procedure, primary data was collected through utilisation of a questionnaire. A questionnaire is a sheet of paper containing questions relating to certain specific aspects, regarding which the researcher collects the data (Raiyani, 2012:80).

For purposes of this research, a questionnaire was developed and used to collect data necessary to carry out the study. The questionnaire was personally distributed by the researcher with the assistance of a fieldworker. Respondents were each given a week on average to complete the questionnaire and the completed questionnaires were collected by the researcher and/or a fieldworker to eliminate non-response bias. This took about three months to accomplish as some participants took more than a week to

complete the questionnaire. However, the researcher managed to get the co-operation of the insurance industry generally as she already had link persons in most of the organisations as she liaised with them to get placement for students from the organisation where the researcher was employed at the time of the research.

1.7.3 Questionnaire design

According to Bhattacharyya (2006), no survey can achieve success without a well-designed questionnaire. Questionnaires can be exploratory (for collection of qualitative data) or formal (standardised) for testing, quantifying and statistical testing of hypotheses (Bhattacharyya, 2006:56). The questionnaire for this study contained two major sections. The first section captured company details, which mainly aimed at determining the stratum within which each respondent fell. The second section captured data which contributed towards determining the level of ERM maturity. This was used in conjunction with the framework developed (see Table 5.2).

1.7.4 Population

The population of the study refers to an aggregate or totality of all objects, subjects or members that conform to a set of specifications (Appannaiah, et al., 2010:55). In the case of this study, all 9 long-term insurance, 11 short-term insurance, 3 reinsurance and 44 brokerage companies in Botswana formed the population of the study. These are all regulated by NBFIRA. From the preliminary research, each of the organisations was estimated to have two people who directly dealt with risk management in the organisation, hence bringing the estimated population in terms of potential respondents to 134. Figure 1.2 shows the details of the population of the study in terms of organisations only (not in terms of people).

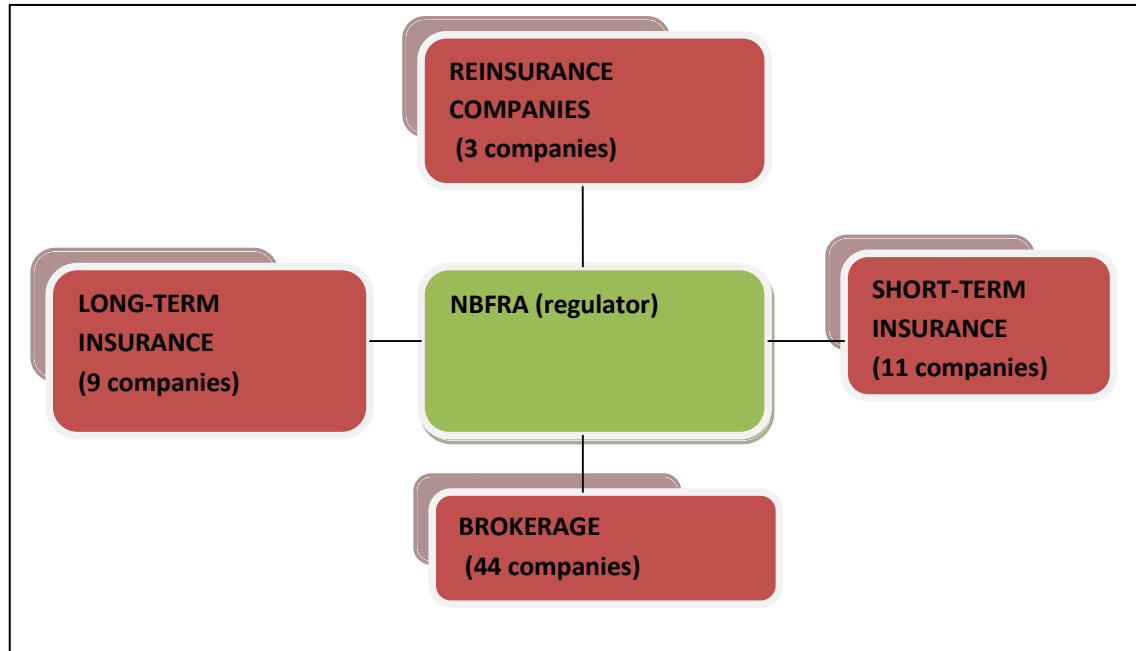


Figure 1.2: Population of the study in terms of number of companies

Source: Researcher's own compilation

1.7.5 Sampling

Krishnaswami and Ranganatham (2009:120) define sampling as the process of selecting a portion of the population to represent the entire population. For purposes of this study, 19 respondents were selected from the 11 short-term insurance organisations, 15 from the 9 long-term insurance companies, 5 from the 3 reinsurance companies and 75 from the 44 brokerages. This brought the sample to a total of 114. In other words, in terms of the organisations, the whole population was used. However, when it came to the estimated population of possible respondents, 114 respondents were sampled from 134 guided by the formula described below.

This study used proportionate purposive sampling (see Krishnaswami & Ranganatham, 2009: 139-140) as the respective four business types were each considered a stratum. The number of respondents was determined through use of the formula by Tabachnik and Fidell (2001:117), as explained in the paragraphs that follow. The findings from the computations implied that each company at least had to complete one questionnaire

while some would need to complete two. The determination of which companies were to complete two questionnaires was purposively done through looking at the size of the organisation.

To find the sampling size, the following equation, as propounded by Tabachnik and Fidell (2001:117), was implemented:

$$N = 50 + 8m \text{ (where } m \text{ is the number of independent variables).}$$

There were eight variables being the eight components of the COSO model. That implied that the sample was to be 114 (out of the estimated 134) respondents coming from the four strata. The 114 was calculated as follows:

$$\begin{aligned} N &= 50 + 8m \\ &= 50 + (8 \times 8) \\ &= 50 + 64 \\ &= 114. \end{aligned}$$

To find the desirable number of respondents per strata, 114 total respondents were distributed among the 67 organisations through proportionate weighting as shown in the table.

Table 1.2: Determination of the sample

Enterprise	Working	Desired number from strata
Short-term insurance	114 (11)	19
	67	
Brokers	114 (44)	75
	67	
Long-term insurance	114 (9)	15
	67	
Reinsurance	114 (3)	5
	67	
Total		114

Source: Researcher's own compilation

As shown in Table 1.2, proportional stratified sampling was used to find the number of respondents to obtain from the respective strata. The sampling procedure is discussed further in Chapter 6 (see 6.3.1). Table 1.3 summarises the population and sample in terms of the number of companies as well as in terms of the number of potential respondents.

Table 1.3 Population and sample

Organisation	Company-wise population	Staff-wise population	Company-wise sample	Staff-wise sample
Short-term insurance	11	22	11	19
Long-term	9	18	9	15
Reinsurers	3	6	3	5
Brokerages	44	88	44	75

Source: Researcher's own compilation

1.7.6 Data analysis

Data analysis is a process that follows just after data had been collected and examined for accuracy, completeness and consistency space (Singh, 2006:220–231). This can be done with the aid of statistical tools to draw a conclusion from the research (Raiyani, 2012:93). In this research, data gathered from the respondents was checked for completeness, and then coded and captured using Microsoft Excel 2010 Version spreadsheet. Analysis of the quantitative data was done using statistical methods aided by the Statistical Package for the Social Sciences (SPSS) Version 16 software.

1.7.7 Reliability and validity

Appannaiah, et al., (2010) et al. define reliability as the extent to which results are consistent over time. If the results of a study can be reproduced under a similar methodology, then the research instrument is reliable. In order to improve the reliability of questionnaire, the researcher used Cronbach's alpha, which is a common measure of internal consistency reliability used to test the reliability. Cronbach's alpha provides a coefficient of inter-item correlations, in other words, the correlation of each item with the sum of all the other items (Cohen, Manion & Morrison, 2007:506).

Validity is defined as the integrity of the conclusions that are generated from a piece of research (Bryman & Bell, 2007:41). To ensure validity of the questionnaire the researcher employed the expertise of the supervisor, a statistician and an industrial expert. The researcher further used a standardised questionnaire to ensure validity. Additionally, one insurance company was used to carry out a pilot study and thus any questions that needed further simplifying were re-written.

1.8 Scope and demarcation of the study

This section discusses limitations that the study was faced with and the delimitations of the study.

1.8.1 Limitation of the study

Due to limited financial resources, the researcher was unable to include all items in the population but the research focused on the sample.

1.8.2 Delimitation of the study

The study was limited to players in the insurance industry, namely insurance, reinsurance and brokerage companies. Agencies, although players in the insurance industry, were not included in the study as they work with insurance companies. They are viewed by the researcher as an 'extension' of insurance companies.

1.9 Significance of the study

This section gives information on how the study will contribute in general and to the insurance industry.

1.9.1 Research in general

This study will contribute to the insurance industry through the proposed ERMMF to assess ERM maturity levels in the insurance industry in Botswana. The study will further contribute through the developed ERM implementation procedure for the insurance industry in Botswana. The study will also contribute to literature on ERM maturity levels in the insurance industry and be a reference for future studies.

1.9.2 Insurance industry

The findings of the study will be informative to the insurance industry and its stakeholders as they strive to strengthen their risk management levels.

1.10 Assumptions

It was assumed that all sampled companies have implemented ERM.

1.11 Ethical considerations

Ethical issues are present in any kind of research. The research process creates tension between the aims of research to make generalisations for the good of others, and the rights of participants to maintain privacy (Krishnaswami & Ranganatham, 2009:28). Ethics pertains to doing good and avoiding harm (Chauhan, 2012:216–217). Harm can be prevented or reduced through the application of appropriate ethical principles. Thus, the protection of human subjects or participants in any research study is imperative (Krishnaswami & Ranganatham, 2009:28).

In this research, to ensure anonymity as part of observation of ethical requirements, the research tool did not require the respondent's name. The name of each company was not requested either. Further to this, the data collected was kept confidential and used solely for purposes of research. Respondents were informed that participation in the research was voluntary, and they were free to change their minds about participation even after they had started filling in the questionnaire. Findings of the study will be provided to the participants upon request. Company management was assured that the information and opinions obtained would be used for purposes of research only and that it would not be available to anyone outside this study. Respondents completed consent forms prior to completing the questionnaire.

Additionally, application for the study went to the University of South Africa Research Ethics Committee for approval. This committee examined all the avenues of the study to ensure that it would not go against the ethics of the university.

1.12 Division of chapters

The thesis is organised as follows:

Chapter one outlined the overview of the whole research by giving the background of the study, its objectives and the methodology that was used to carry out the study. It further elaborated the significance of the study and explained how ethical issues were observed.

Chapter two contains the literature review that focused on risk management. In the chapter, risk and risk management are defined in a way that lays the foundation for the next chapter. Risks are classified in several ways as suggested by different authors.

Chapter three gives particular attention to literature on ERM. Continuing from the discussion in Chapter two, Chapter three differentiates traditional risk management from ERM. Advantages of moving into ERM are discussed in the chapter. Risk management models that include the COSO framework are detailed in Chapter three.

Chapter four further covers literature on risk management from the insurance perspective. Risks faced by the insurance industry are examined. It is in this chapter that attention is paid to the insurance industry of Botswana.

Chapter five unveils the developed ERMMF proposed for use to measure the level of ERM maturity in the Botswana insurance industry.

Chapter six clearly details the methodology that was used in the study. It articulates the research philosophy and the research design. The population and sample are defined and the sampling procedure explained. The data capturing procedure is laid out, incorporating the expected ethical considerations.

Chapter seven discusses the findings of the study and presents the proposed ERM implementation process (ERMIP) and the proposed ERMMF. The chapter answers the research questions as presented in Chapter one.

Chapter eight presents the conclusion of the study and further makes recommendations for further study and for implementations in the insurance industry.

CHAPTER TWO

RISK MANAGEMENT

2.1 Introduction

Chapter one gave an overview of the objectives of this study. It also highlighted the methodology adopted by the study, showing the complementarity between the research instrument and the proposed framework for measuring ERM maturity levels in the Botswana insurance industry. The selection of COSO as a basis for the development of the proposed ERMMF was justified in the chapter.

Chapter two reports on a thorough review of literature to contribute towards the development of the proposed framework that in turn assisted in the assessment of the ERM maturity levels in the Botswana insurance industry. The chapter further became the basis on which the proposed ERMIP was formed as fulfilment of one of the research objectives.

In the present chapter, different definitions of risk by different authors are discussed, leading to the definition that this study adopted. Diverse types of risks are then examined, giving attention to the varied ways in which several authors have classified risks. The chapter also presents a discussion of the types of risks as defined by various sources. All these are expected to affect the industry in which this study was carried out – the Botswana insurance industry.

Having discussed risks, the chapter continues to look at risk management and its definitions. The risk management process is detailed in all its stages as suggested by the literature.

Risk management strategies – risk control and risk financing – are discussed. These are essentially part of the risk management process. They are a way of responding to

risks. Following that, strategic risk management is briefly reviewed, thus linking risk management to ERM.

2.2 Conceptual framework of the research process

In Chapter one, several secondary objectives congruent to the primary objective were identified. Figure 2.1 illustrates where Chapter 2 fits into the research process as part of the fulfilment of the research objectives.

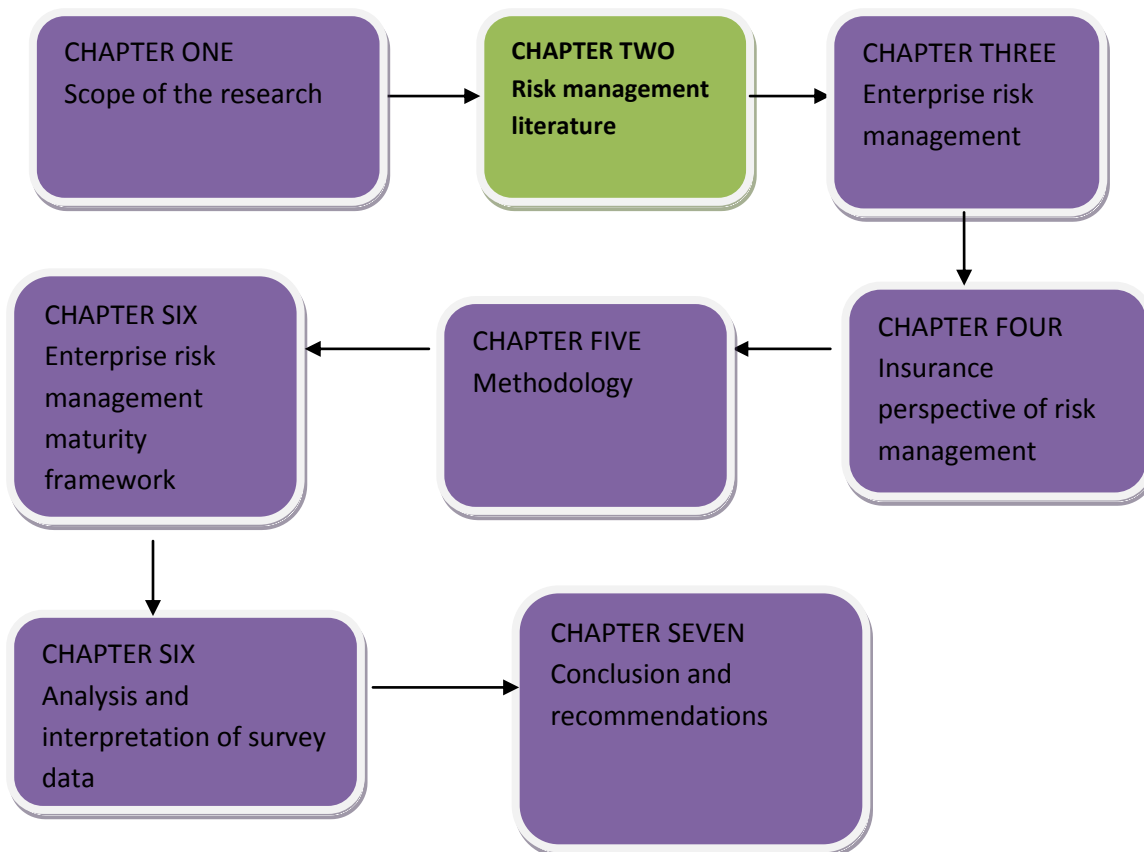


Figure 2.1: The position of Chapter 2 in the research process framework

Source: Researcher's own compilation

2.3 An introduction to risk management

Risks may affect the desired outcome of the operations of an organisation, specified in its mission or set of corporate objectives, in numerous ways. Risks may inhibit what the organisation is seeking to achieve, in which case they may be regarded as operational or insurable risks as they can result only in negative outcomes (hazard risks) (Chapman, 2011:3). These would have to be managed within the levels that the organisation is willing to tolerate them. Risks may enhance the objectives of the organisation, and such risks are deliberately taken by organisations to achieve positive returns (opportunity risk) (Hopkin, 2010:13). Lastly, risks can create uncertainty about the outcomes (control risk) (Segal, 2011:9). Organisations will generally have an aversion to control risks (Chapman, 2011:3; Hopkin, 2010:13). Knowledge of the behaviour and effect of such risk would aid management in dealing effectively with risks that face an organisation.

Risk management has apparently taken centre stage lately as one compelling business issue of the time (Chapman, 2011:3). Organisations are exposed to risk in its complexity, magnitude and dynamic nature amidst the environment characterised by rapid changes. In addition, recent events, among which are terrorism, undesirable weather events and the worldwide financial crisis (2009), have led to increased risk in global economies (Hopkin, 2010:2). Other factors that have led to significant focus on risk management comprise an increase in serious fraud, accounting scandals, increased regulatory pressure and the focus of credit rating agencies on risk management processes (Segal, 2011:9). In driving the strategic direction for a business, there is a need to understand clearly what creates the value of the business and what destroys it, thereby pursuing opportunities that match the organisation's risk appetite (Chapman, 2011:4). This confirms the importance of a study around risk management. It was envisaged that risk management is a management function which, if successfully implemented, could lead to the creation of value. The achievement of this objective was obtainable by paying attention to each stage of the risk management process, details of the design, implementation and monitoring of the framework supporting the risk

management activities (Hopkin, 2010:4–5). Based on the facts above, there was therefore a requirement for each organisation to understand the risks that faced it and to indicate clearly how the risks would be handled.

Following the need for more intense risk management subsequent to events mentioned above, risk management has been upgraded into ERM. ERM is considered a conduit to aligning strategy, processes, people, technology and knowledge to identify and manage uncertainties and risk (Segal, 2011:7). It differs from the traditional risk management process in that it takes a more integrated or holistic approach than traditional risk management. It unifies a philosophy that draws together management of all types of risks (Hopkin, 2010:42). Risks are evaluated as inherently dynamic and interdependent through a top-down risk management approach (Chapman, 2011:5). Risk is further integrated into the organisation at strategy-setting level, thereby making it part of the culture of the organisation (Marchetti, 2012:2). It was important to discuss ERM after discussing risk management. The understanding of risk management had to facilitate a better understanding of ERM.

This chapter looks closely at definitions of key terms in risk management, and discusses the analysis of the risk management process. Different approaches to risk management will be discussed, thus laying out a clear background of what led to ERM.

2.4 Definition of risk

Risk has been defined in diverse ways by different authors (ISO Guide 73, 2010a, Institute of Risk Management [IRM], 2010). The definitions will be analysed in this section taking note of the essential elements that each contains. The Macmillan English Dictionary (2002:1227) defines risk as a condition in which there is a possibility of an adverse deviation from a desired outcome that is expected or hoped for. Simply put, it is a possibility of failure to achieve desired objectives. ISO 31000 (2009b) defines risk as the effect of uncertainty on objectives. This could imply that a risk can be positive or

negative in nature through undertaking loss making businesses or failing to take profit bearing opportunities.

As mentioned in Chapter 1 (see 1.2.1), risk can also be summarised according to the definitions given by ISO Guide 73 (2009a), the Institute of Risk Management (IRM, 2010) and the IIA (2010b) as the combination of the probability of an event and its consequences, or the effect of uncertainty on objectives, and in all types of undertaking, there is the potential for events and consequences that constitute opportunities for benefit (upside) or threats to success (downside). Of importance in the definitions is the note that risks lead to failure to meet organisational objectives. This emphasises the need for organisations to stay alert to the risks with which they are faced.

The other elements of the definition of risk, i.e. the probability of an event occurring or its outcome, and the consequences of that event or its outcome, will be expanded on in the discussion of the risk management process (See 2.6.3). It should however be emphasised that risks can be a result of failure to achieve objectives and/or a result of missing of opportunities availed to the organisation.

2.5 Types of risk

The British Standard (BS 31100) posits that classifying risks aids to define the scope of risk management in the organisation, and therefore provides a structure and framework for risk identification while giving the opportunity to aggregate similar kinds of risks across the whole organisation (BS 31100, 2008). The category to be used by the organisation depends on its size, nature, complexity, context and maturity level in terms of risk management (Hopkin, 2010:133).

Several authors have used different approaches in classifying risks. These will be examined in turn. Table 2.1 provides various approaches to risk classification and each of these of these risks is discussed thereafter.

Table 2.1: Approaches to risk classification

Approach	Classification
COSO classification	Strategic Operational Reporting Compliance
IRM classification	Financial Strategic Operational Hazard
BS 31100 classification	Strategic Programme Project Financial Operational
The firm risk scorecard classification	Financial Infrastructure Reputational Marketplace
PESTLE risk classification	Political Economic Sociological Technological Legal Environmental
Olso and Wu (2010) classification	Strategic risks Operational risks Legal risks Credit risks Market risks

Source: Researcher's own compilation

The various risks in different classifications as listed in Table 2.1 are discussed in the following paragraphs. COSO classifies risks as strategic risks, operational risks, reporting risks and compliance risks (COSO, 2004).

2.5.1 COSO classification

Strategic risks are risks regarding the extent to which an organisation has a formal process to identify how potential changes in markets, economic conditions, regulations and demographic changes affect business (Barr, 2012: 191). Strategic risks therefore emanate from strategic decisions made at board level (Olso & Wu, 2010:16). This suggests that, in setting its objectives at strategic level, an organisation is expected to incorporate the management of risks from the onset.

Operational or operations risks refer to uncertainty regarding a financial firm's earnings due to failures in computer systems, errors, misconduct by employees, floods, lightning strikes and similar events (Hudgins & Rose, 2010:179). In the case of an organisation situated in Botswana, interruptions may be a result of power cuts or water rationing among others (Hong Kong Institute of Bankers [HKIB], 2011). Such disruptions have the potential to interfere with business processes and thus leading to failure to meet stakeholder needs.

Reporting risk emanates from presentation of financial risks. It is a narrower version of financial risks used by other classification systems (Hopkins, 2010:133). These are risks that may result in the misrepresentation of financial statements of an organisation. Misrepresentation of financial statements poses challenges to stakeholders who are likely to make imprudent decisions as they deal with the organisation.

Compliance risk, unlike legal risk, goes beyond violation of the legal system and includes violations of rules and regulations from the regulating bodies (Hudgins & Rose, 2010:180). An insurance organisation in Botswana is faced with compliance risk in that it may fail to comply with the requirements of the regulator, NBFIRA, and the Insurance

Act (No. 1 of 2016) of Botswana (NBFIRA, 2015). Noncompliance may result in payment of exorbitant fines or loss of customers (Hudgins & Rose, 2010:180).

The classification takes cognisance of the fact that all levels of functions (strategic to operational) in an organisation are affected by risks. It is in line with claims by the COSO ERM framework that risks are faced at all levels and risk management must therefore be approached holistically by the organisation (COSO, 2004).

2.5.2 IRM classification

The IRM classifies risks as financial risks, strategic risks, operational risks and hazard risks (IRM, 2010). Clearly, there is an overlap between the classification by COSO and IRM with strategic risk and operational risk in common. While COSO focuses on reporting risks which are a part of financial risks (COSO, 2004), IRM classifies them as financial risks (IRM, 2010)).

Financial risks are risks that could affect the way in which money is managed and profitability is achieved (Hopkin, 2010:150). They may arise from the effect of market forces on financial assets or liabilities (Hudgins & Rose, 2010:180). Financial risks may be controllable or not controllable, depending on the source of the risk (Hopkin, 2010:151). It is integral for management to distinguish between controllable risks and those not controllable, and to come up with a sustainable way of handling each category.

Hazard risks are risks arising from property, liability or personnel loss exposures and are generally the subject of insurance (CIMA, 2008:9).

2.5.3 BS 31100 classification

The classification by BS 31100 categorises risks into strategic risks, programme risks, project risks, financial risks and operational risks (BS 31100, 2008). Again, it is clear that strategic, operational and financial risks are common in this category.

Project risks are those risks associated with projects, such as that the project is not successfully completed within the expected cost, time and performance objectives (Association for Project Management [APM], 2000:3). This definition implies that a project is exposed to the same risks as the risks to which organisations are exposed, only that in this case, they are specifically associated with a specific project. Organisations need to assess every step of the project, identifying risks emanating from each stage for careful management.

The PMI Standard for Program Management defines a programme as a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. **Programme risk** therefore looks at different risks associated with different projects. The MITRE Corporation (2013:2) defines programme risk as an uncertain event or condition that, if it occurs, has a positive or negative effect on one or more programme objectives.

The firm risk scorecard classification classifies risks as financial risks, infrastructure risks, reputational risks and marketplace risks (Hopkin, 2010:134). Financial risks are common in the classifications by IRM, BS 31100 and the firm risk scorecard classification.

Infrastructure risks are internal in nature and will affect the level of efficiency and dysfunction within the core processes (Hopkin, 2010:134). They involve assets, systems and networks that contribute to critical functionality (Homeland Security, 2010:2). Infrastructure risks are classified as operational risks by other authors (HKIB, 2011, Hopkin, 2010) and operational risks were discussed in 2.5.2.

Reputational risks are external in nature and will affect the desire of customers to deal or trade, as well as the level of customer retention (Deloitte, 2014a:2–13; Hopkin, 2010:135). Due to the nature of their business and the market they serve, insurance companies in Botswana have inherent reputational risks since people have a

preconception that insurance companies are out to defraud them. These companies therefore need to work hard to prove this preconception wrong.

Marketplace risks on the other hand, will impact the level of customer trade or expenditure and customer retention (Hopkin, 2010:135).

2.5.4 PESTLE classification

The PESTLE risk classification uses the acronym PESTLE to identify risks as political, economic, sociological, technological, legal and environmental risks. This category of risks indicates risks at macro level and are therefore mostly beyond the control of an organisation. Figure 2.2 shows Rastogi and Trivedi's (2016:387) categorisation of risks associated with each group.

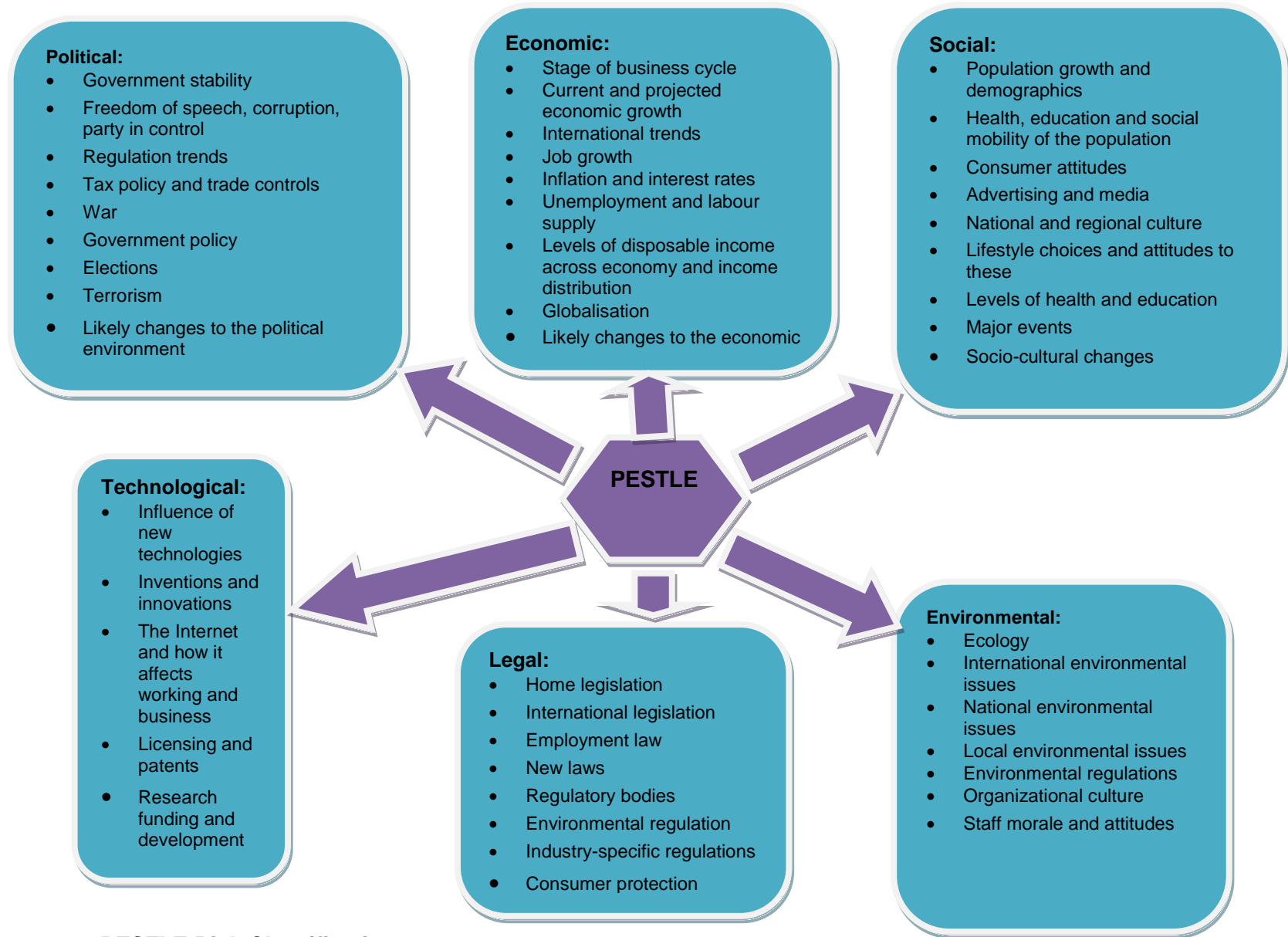


Figure 2.2: PESTLE Risk Classification

Source: Researcher's own compilation

Political risks are inherent to tax policy, employment laws, environmental regulations, trade restrictions and reform, tariffs and political stability (Ostojic & Unkovic, 2011:80).

Economic risks in this case come with economic growth or decline, interest rates, exchange rates and inflation rate, and wage rates (Athanasios & George, 2013:5027).

Sociological risks emanate from issues regarding cultural norms and expectations, health consciousness, the population growth rate, the age distribution, career attitudes, emphasis on safety and global warming (Athanasios & George, 2013:5027). Cheap health services in Botswana and availability of funds to buy assets at relatively affordable interest rates could affect the demand for insurance services, resulting in failure of insurance organisations to meet their objectives.

Technological risks are risks coming from technology changes and affecting products or services, new technologies, barriers to entry in given markets, financial decisions, such as outsourcing and the supply chain (Athanasios & George, 2013:5030). The extent to which an organisation has embraced technological changes is expected to affect its performance in the market. Typical customers would prefer organisations that meet their demands fast, and this can be enhanced by the constant update of technology.

Legal risks arise from violations of or non-compliance with laws, rules, regulations, prescribed policies and ethical standards (Athanasios & George, 2013:5031). These may also arise when laws or rules governing certain products or activities of an organisation are unclear or untested (Athanasios & George, 2013:5032). This may result from changes to legislation that affect employment, access to materials, quotas, resources, imports or exports and taxation, among other factors (Hopkin, 2010:136). Organisations in the insurance industry must stay abreast of legal changes in the market. An example would include issues to do with consumer rights and privacy issues.

Environmental risks emanate from ecological and environmental aspects. However, some of the risks will also fall within the social and economic category ((Athanasios & George, 2013:5033; Hopkin, 2010:136). At present, the world is particularly concerned about issues pertaining to the preservation of the environment. Failure to comply may lead to boycotting of products or services by consumers or payment of certain fines.

2.5.5 Olso and Wu Classification

Olso and Wu (2010) classified risks as strategic, operational, legal, credit and market risks. Their classification does not differ much from the other classifications.

Credit risks are common to the financial sector and are linked to the financial soundness of the party with which the organisation is dealing (Dun & Bradstreet, 2007:15). Insurance organisations need to be alert when underwriting insurance or dealing with any stakeholders.

Market risks are risks of losses due to movements in financial market variables (Dun & Bradstreet, 2007:14). These may be interest rates, foreign exchange rates and security prices. It is the risk of fluctuations in portfolio value because of movements in such variables (Dun & Bradstreet, 2007:15). Organisations with subsidiaries outside the home country are most likely to be affected by foreign exchange rates and security prices.

Having looked at different classification it was observed that the COSO classification has been perceived as widely used due to its comprehensive nature. However, it has weaknesses, which most of the classifications in the table have. The weaknesses include the fact that classified risks display a great deal of overlap. On the other hand, the PESTLE risk classification method provides a clear analysis of the issues that should be addressed within the external environment. Hopkins (2010) sees the PESTLE approach as most applicable to the public sector. The insurance organisations, as financial institutions do need to analyse both their internal and external environments. This means they would use a combination of classifications that encompass risks from

the internal and external environments. Olso and Wu (2010)'s classification is would also be helpful to the insurance industry as its classification is mainly targeted at financial institutions.

2.6 Risk management

This section defines risk management and details the risk management process.

2.6.1 Introduction

Risk management can be traced back to games of chance and gambling, which were depicted in Egyptian tomb paintings as early as 3500 BC (Bernstein, 1998). However, more tangible traces of risk management were observed in 1654 when the Renaissance was in full swing. The formal recorded development of risk management originated in the United States before the 1950s, where it was part of the insurance management function. As the discipline matured there was an observation that there were many risks facing organisations that were not insurable. As this realisation became more and more widespread, links of risk management with insurance became less strong, so that in the end, insurance became just one risk control technique, which was applicable to only a portion of hazard risks (Hopkin, 2010:4–5).

In the recent past, failure of many financial institutions has resulted in risk management being a key area of focus for CEOs. Risk management has been taken a level higher than just realising that there are many risk mitigation measures apart from insurance. In addition, increased volatility around the world and highly leveraged positions created a further need for risk management in every financial organisation (Dun & Bradstreet, 2007:5–6). Risk management has been confirmed to bringing order to the process of risk quantification, enabling the assigning of value to the estimated risk of loss, while flagging extremely risky situations for necessary mitigative action by management (Anderson, 2014:2). Risk management is seen to improve risk awareness when risk management is properly implemented by the company, which will result in increased valuation and reduced cost of capital and hence a more objective performance

appraisal based on risk-adjusted capital employed (Dun & Bradstreet, 2007:7). The following paragraphs discuss risk management in detail.

2.6.2 Risk management – definition

Bainbridge (2009) defines risk management as the process by which business organisations proactively determine the types and levels of risk appropriate for achieving the strategic goals of the organisation. Another definition is given by Anderson (2014) who says it means, “managing effectively in a risky and uncertain environment”, which involves identification of risks and identifying their sources and consequences (Anderson, 2014:3). The two definitions converge in seeing risk management as continuous and minimising the effect of risk. These definitions are captured by some risk management standards in their comprehensive definition of risk management. The standards define risk management as a process of coordinated activities, which aim to help organisations understand, evaluate and act on all their risks with a view to increasing the probability of success and reducing the likelihood of failure to direct and control an organisation with regard to risk (BS 31100, 2008; IRM, 2010; ISO Guide 73, 2009a).

The definitions above suggest that an organisation must acknowledge the presence of risks and then take a deliberate decision to deal with such risks. Risk management definitions do not indicate who must take part in the efforts to handle risks. ERM, which is discussed in the next chapter (see section 3.1) is more than just traditional risk management. Risk management will be discussed next to lay the foundation for ERM.

2.6.3 Risk management process

Hopkins (2010) and Periasamy and Veeraselvam (2013) give the process of risk management as summarised diagrammatically in Figure 2.3. Each of these is discussed in the paragraphs that follow.

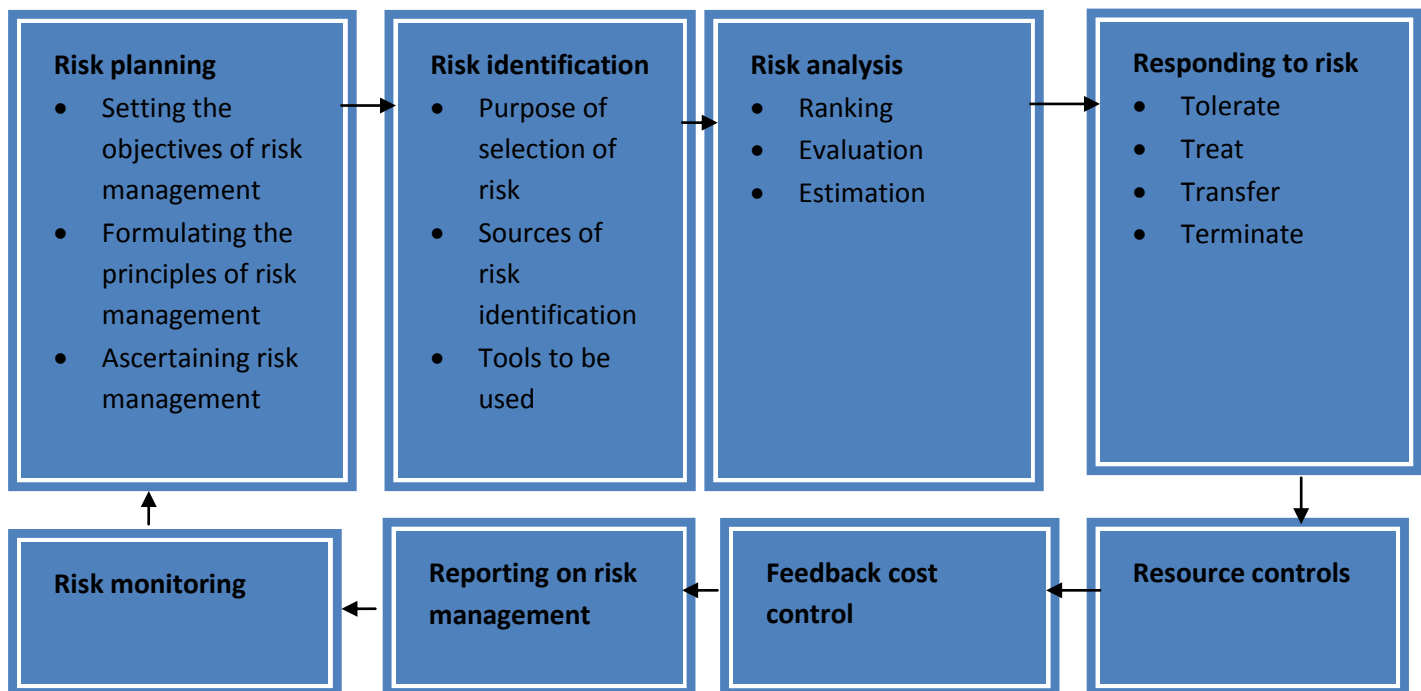


Figure 2.3: The risk management process

Source: Researcher's own compilation

2.6.3.1 Risk planning

Effective ERM is linked with planning. When ERM is integrated in the business planning cycle of the organisation, decisions of the company, for example on issues of growth of business lines, acquisitions, new product development and new channels, are made on a risk-adjusted basis and fully informed by the ERM process (Rahman, Noor, & Ismail, 2013:24). Subsequently, the annual risk budget is set in accordance with the business strategy of the enterprise (International Actuarial Association [IAA], 2009:3). If risk is not taken into consideration at strategic level, the rest of the processes fail to incorporate risk planning.

2.6.3.2 Risk identification

Risk identification should be an ongoing and comprehensive process throughout an organisation, involving all levels of staff and all business functions (Ariff, Zakuan, Tajudin, Ahmad, Ishak & Ismail, 2014:427). This is the result of bottom-up and top-

down processes. Figure 2.4 depicts some of risk identification methods that an organisation could use. Some of these are discussed thereafter.

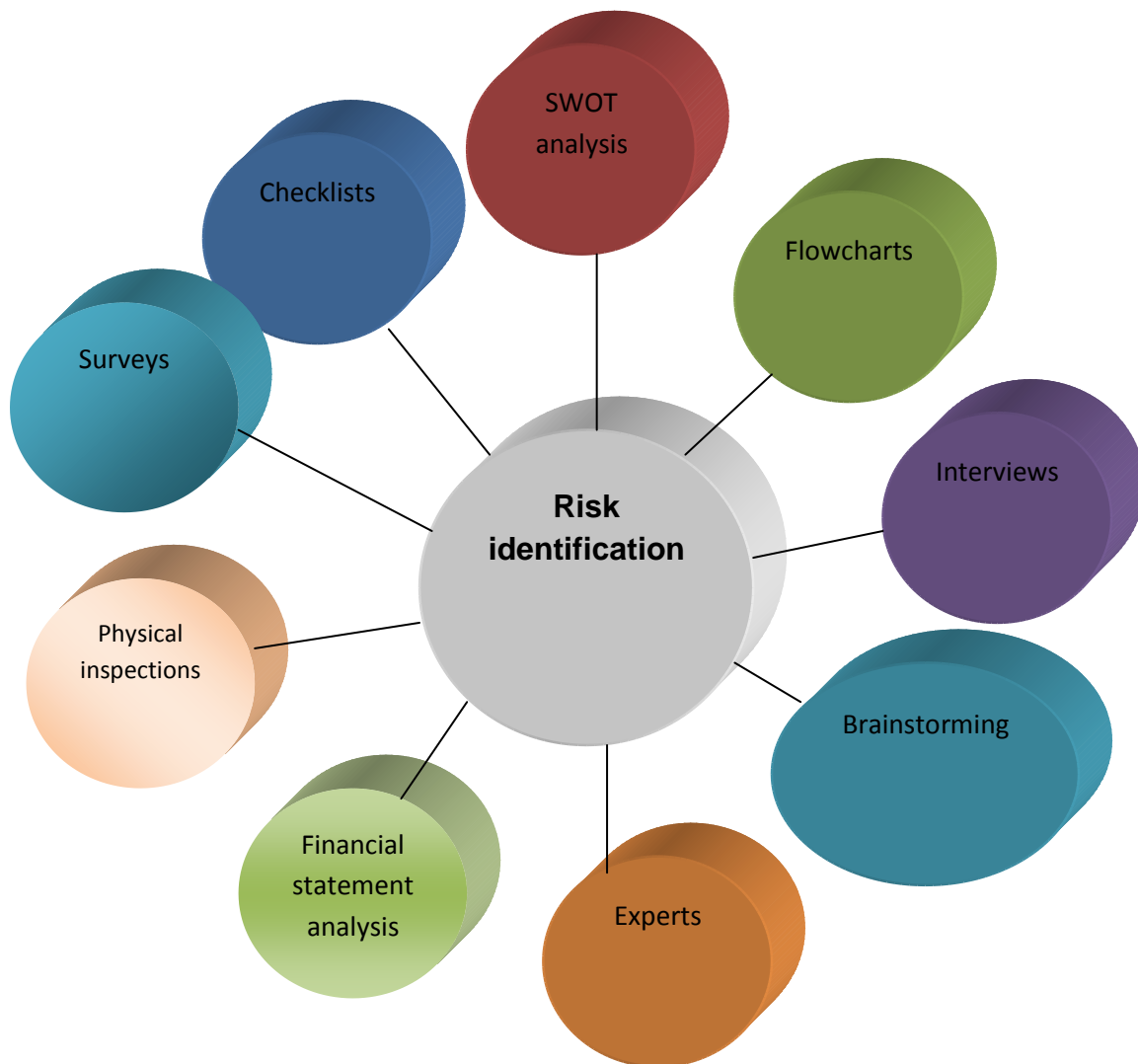


Figure 2.4: Methods of risk identification

Source: Researcher's own compilation

2.6.3.2.1 Brainstorming

This is an open-ended investigation into events that could potentially affect a business and its operations (Beasley, Jenkins & Sawyers, 2006:159). This method works well when the objectives of the enterprise are clear and understandable to the participants. In a well-facilitated brainstorming session, the participants are collaborators, comprising

a team that works together to articulate the risks that may be known by some in the group (Beasley et al., 2006:160). Facilitating a brainstorming session takes special leadership skills, and, in some organisations, members of the internal audit and risk management staff have been trained and certified to conduct risk brainstorming sessions (Moeller, 2011:35). In addition to well-trained facilitators, the participants need to understand the risk management framework and how the brainstorming session fits into the risk management process (Curtis & Carey, 2012:9). In the context of an insurance organisation, different functional leaders could sit with the employees in their departments for a brainstorming session. This enables ideas that come from people who are on the ground to be brought forth.

2.6.3.2.2 Interviews

During interviews, every one of the organisational or operating units is given a template with instructions to list the key strategies and/or objectives within his or her area of responsibility and the risks that could impede the achievement of the objectives (Wijeratne, Perera, & De Silva, 2014:402). Each unit is also asked to assess its risk management capability using practical framework categories such as those contained in the ERM framework from the Committee of Sponsoring Organizations of the Treadway Commission (COSO) (Moeller, 2011:61). In this case, a risk specialist or a functional manager in an insurance organisation would interview certain members of the organisation on the risks that they observe the organisation to be faced with.

2.6.3.2.3 SWOT analysis

SWOT (strengths-weaknesses-opportunities-threats) analysis is a technique used to assist organisations to formulate their strategy (Helms & Nixon, 2010:2). The strengths and weaknesses are internal to the company as they are concerned with the culture and the structure of the organisation, as well as the financial and human resources (Wood, 2005:54). The company would want to capitalise on the combination of its strengths to synergise its competencies to achieve a competitive advantage (Wood, 2005:55). The opportunities and threats consist of components outside the company, and which are therefore mostly not under the control of the organisation. The variables comprise

political, societal and environmental issues, and industry-wide risks (Helms & Nixon, 2010:2–4). Carrying out a SWOT analysis therefore is envisaged to help an organisation identify its potential risks for proper planning before they affect the organisation.

2.6.3.2.4 Risk questionnaires and risk surveys

A risk questionnaire that includes a series of questions on both internal and external events can also be used effectively to identify risks. For the external area, questions might be directed at political and social risk, regulatory risk, industry risk, economic risk, environmental risk and competition risk, among others (Curtis & Carey, 2012:8). Questions on the internal perspective might address risk relating to customers, creditors/investors, suppliers, operations, products, production processes, facilities, information systems, inter alia (Ibid.). Questionnaires are valuable as they can help a company think through its own risks by providing a list of questions around certain risks (Curtis & Carey, 2012:9; Moeller, 2011:38). The disadvantage of questionnaires is that they are not usually linked to strategy (Moeller, 2011:38). Questionnaires also give a 'straitjacket approach' whereby respondents may be required to stick with the guiding questions. This however limits other information that might be crucial to risk management-related decisions.

2.6.3.3 Risk analysis

Risk analysis entails risk evaluation and quantification after risks have been identified. Evaluation is divided into two parts: the probability of loss occurring, and its severity (Ariff, et al., 2014:427). The probability analysis shows the various possibilities of the perceived scenarios for a given set of circumstances (Curtis & Carey, 2012:2). The severity refers to the direct and indirect measurable impact of the scenarios being analysed (Gupta, 2007:9). Evaluation also entails quantitative analysis and qualitative analysis (Curtis & Carey, 2012:3). Abkowitz and Camp (2017) mention RiskCatcher as software structured in a user-friendly, menu-driven format, which could be used to perform both quantitative and qualitative risk assessments to generate more accurate

results. The software is available online and insurance organisations could explore the use of such software.

2.6.3.3.1 Qualitative analysis

This type of analysis is useful during the initial screening of the risks and opportunities (Wijeratne, et al., 2014:402). This is when exact figures are not available and qualitative analysis must be used to work out the probability of an event happening and how severe the effect of the loss will be (Curtis & Carey, 2012:8). Each risk and opportunity is assessed according to descriptive scales that the organisation may develop (Curtis & Carey, 2012:8; Hong Kong Institute of Bankers [HKIB], 2011:121). While qualitative analysis eliminates the risk of data manipulation and short-termism, the method tends to be subjective (Wijeratne, et al., 2014:402). Subjectivity may be eliminated through conversion of qualitative data to quantitative data (Wijeratne, et al., 2014:403).

2.6.3.3.2 Quantitative analysis

In quantitative analysis exact details of losses that have occurred are available, for example the actual loss in pula (Botswana currency). Quantitative analysis requires numerical values for both impact and likelihood using available data from reliable sources (Wijeratne, et al., 2014:388). The quality of the analysis is a function of the accuracy and completeness of the numerical values and the validity of the models used (Curtis & Carey, 2012:8; Moeller, 2011:71). This method is often deemed more objective and accurate than the qualitative approach but it has challenges such as the fact that past data, which is not forward-looking is used. It is therefore reactive in nature (Wijeratne, et al., 2014:388).

Figure 2.5 shows the risk frequency impact analysis, which guides the risk response strategy.

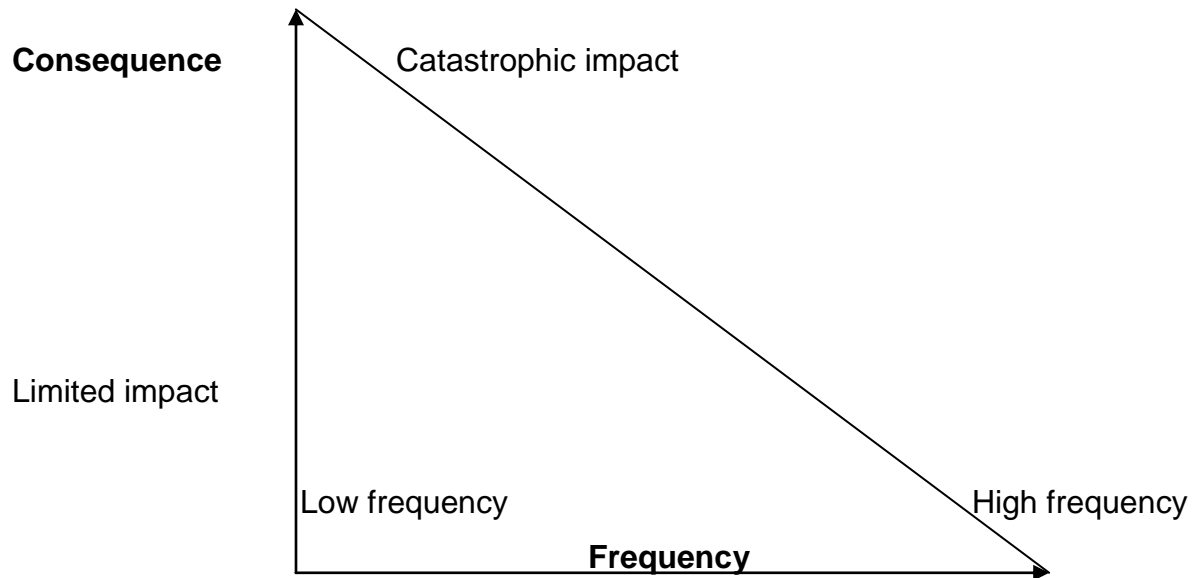


Figure 2.5: Risk frequency/impact analysis

Source: Researcher's own compilation

There are risks that do not occur quite so frequently but when they occur, their outcome is catastrophic, for example earthquakes and floods (Sharma, 2013:30). On the other hand, there are risks that occur quite frequently with little impact on the organisational finances, for example shortfalls in cash receipts (Sharma, 2013:31). Insurance organisations would be expected to understand the varying nature of risks as their services largely form part of the solution to risks.

2.6.3.4 Risk response

The results of the risk assessment process serve as the primary input to risk responses. The response options – accept, reduce, share or avoid – are examined and cost-benefit analyses performed, a response strategy formulated, and risk response plans developed (Curtis & Carey, 2012:2). Insurance organisations accept or facilitate the process of risk sharing as the nature of their business demands. Risk response methods are discussed in more detail in section 2.6.4.

2.6.3.5 Risk reporting

Reports are generated periodically on the compliance plan, new anticipated risks, and risk measures, for example (Ariff, et al., 2014:428). These come from different organisational functions that may include the risk management department, finance department, marketing and human resources management (Certified Institute of Management Accountants [CIMA], 2008:8). CIMA (2008) further suggests that key result indicators be used as thresholds and escalation triggers for reporting and action. Risk reporting assists senior management and the board of directors to gain a real understanding of the size and potential effect of risk exposures (HKIB, 2011:142). With the recent technological developments that have made it easy to consolidate data for ease of access, reports can be generated more regularly than before (Ariff, et al., 2014:428).

There are two areas of risk reporting: reporting to external audiences and reporting to internal audiences (Ekramy & Mellett, 2013:841). External risk reporting is said to have developed rapidly in the last few years. In the United Kingdom, for example, it is proposed that risk reporting be part of the financial statements (Ibid.). The reporting of risks and risk management information is necessary for internal decision-makers to incorporate risk evaluations into their decisions (CIMA, 2008:8).

2.6.4 Combined (integrated) assurance

Combined assurance is defined by the Institute of Directors in South Africa (IoDSA) (2009) as assimilating and allying assurance processes in an organisation to augment risk and governance supervision while catering for the organisation's risk appetite. The complex nature of organisations and the availability of voluminous and various information resulting from globalisation and technological developments, have resulted in the production of distinct reports that lack aggregation (IoDSA, 2009). Combined assurance has come at the right time by providing a nominal and proficient way to combine different appraisals and assessment systems and reporting layouts from various isolated departments (MetricStream, 2016:1)

Decaux and Sarens (2015) indicate that organisations have customarily engaged several assurance providers to ensure that their boards accomplish objectives to monitor duties and apply corporate government exercises. However, engagement of several assurance providers and processing of multiple reports can be tedious to organisations. This can be alleviated through coordination among different assurance providers when an organisation brings them all together to perform their services to allow immediate validation and effectiveness. On this matter, the IIA (2012a) recommends that the chief audit executive of an organisation ought to share information and synchronise activities with other internal and external assurance providers. This is to ensure appropriate coverage of all essential areas in an organisation and to minimise replication of efforts. Effective combined assurance requires a synchronised and stable methodology that integrates leadership and the governance structure, management controls, procedure and systems, internal audit as well as external audit (MetricStream, 2016:2). Undoubtedly, this could eliminate duplication and omission of information.

MetricStream (2016) maintains that combined assurance is beneficial as it delivers an all-inclusive and complete view of the efficacy of governance, risk management and controls in an organisation for use by executive management and other relevant committees. Informed decisions can then be made through evaluation, consolidation, and reporting of information provided by different assurance providers.

One of the fundamental prerequisites of the board is to obtain assurance on the organisation's ERM procedure to ensure that it achieves the desired results and that the major risks are recognised and handled at a satisfactory level. Combined assurance intends to augment the assurance reporting obtained from management, internal assurance providers and external assurance providers on risks that the organisation encounters (IIA, 2012b).

Combined assurance has been attributed with three lines of defence. The first two lines of defence are the responsibility of senior management while the third is a responsibility of the board and/or audit committee. The first line of defence has to do with operational

management and internal control issues. The second line of defence handles risk management and compliance functions, among others. The third line of defence is concerned with internal and external audit and risk reporting. Combined assurance thus seeks the aggregation of these three lines of defence for the benefit of the organisation (IIA, 2012b).

Upon reviewing combined assurance, the researcher notes the following ways in which combined assurance complements ERM. The first line of defence of the combined code demands management effort in formulating strategic objectives that cater for management of risks. The tone is to be set at the top to cultivate a risk management culture within the organisation. The second line of defence requires management to set clear and well-communicated risk policies. It further recommends effective risk response mechanisms and monitoring systems. Finally, the third line requires the efforts of non-executive management to handle independent assurance and oversight. The requirements correspond with COSO's eight components of ERM: internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication and monitoring.

2.6.5 Risk management strategies

Risk management is important as it can be used to protect against loss or danger arising from risky activities (Gupta, 2007:8). Risk management strategies should be spelt out in the management policies. According to the Consultative Group for International Agricultural Research (CGIAR) (2006), these are:

- the scope of risk management activities;
- approach to risk appetite;
- risk management framework, processes and procedures applicable to all risk management and opportunity assessment activities in the organisation;
- roles and responsibilities for risk management;
- inexperienced staff orientation and methods for keeping staff aware of risk management responsibilities;

- communication channels for management and staff to discuss risks and report concerns and lessons learned about specific risks and opportunities; and
- documentation and reporting requirements.

Identified risks can be managed through risk control and risk financing. These are discussed in the following sections.

2.6.5.1 Risk control

Risk control, which is used on physical risks, covers all measures aimed at avoiding, eliminating or reducing the chances of loss-producing events, or limiting the severity of the losses that do happen (HKIB, 2011:127). Some of these may require considerable technical knowledge (Gupta, 2007:10). The RiskCatcher referred to earlier (see section 2.6.3.3) or similar software could help the insurance organisations to make informed decisions on which risk control technique to use.

Avoidance implies that a loss exposure is not acquired, while eliminating implies abandoning an existing one (Gupta, 2007:10). Risks can be reduced through enhancing and monitoring the level of precautions taken to minimise the loss through exposure. They can be reduced also through diversification of investments (HKIB, 2011:128). An insurance organisation could choose to avoid investing in risky markets or could withdraw funds as the environment changes in a particular market.

2.6.5.2 Risk financing

When the risk exposure for an organisation exceeds the maximum limit that the organisation can bear, it becomes necessary either to transfer or to reduce risk, and there is a cost involved in this case. Gupta (2007:8–10) summarises risk financing as follows: risk financing techniques include risk retention and risk transfer.

2.6.5.2.1 Risk retention

This implies that the losses arising due to a risk exposure shall be retained or assumed by the party or the organisation (Qiao, 2007:38). Risk retention is generally a deliberate decision for business organisations with the following inherent characteristics:

the consequential losses are small; and losses are shown as operating expenses or can be funded with retained profits.

Self-insurance and captive insurance are the popular risk retention techniques. **In self-insurance**, the part or whole of the exposure arising from a risk factor is retained by the firm through formal arrangements. This may be done by keeping aside funds to meet insurable losses. This is done when the opportunity cost of retaining the risk is less than the transfer of risk (Qiao, 2007:37). The benefits of self-insurance are seen in its transaction cost saving, accuracy when predicting, and minimisation of disputes. This method further enables the organisation to invest the funds that would otherwise have been given to a third party (Gupta, 2007:11).

A **Captive insurance** company is an entity created and controlled by a parent company, whose main purpose is to provide insurance to its corporate owner (Bunting, Kirkpatrick & Kurtz, 2011:3). This helps the parent company to save in terms of overhead costs and profits that would otherwise be charged by the insurance company (Curtis & Carey, 2012:6).

2.6.5.2.2 Risk transfer

During risk transfer, the exposed party transfers the whole or part of the losses consequential to risk exposure to another party at a cost. Risk may be transferred through the following (HKIB, 2011:126):

Insurance is a contractual transfer of risk whereby the insurance company agrees to indemnify the losses arising out of a pre-determined occurrence and charges some cost for this act. The charge is called a premium. This method is appropriate when the severity of losses is very high (HKIB, 2011:130).

The **non-insurance transfer** methods include indemnity agreements, incorporation, hedging and diversification (Curtis & Carey, 2012:5). These will not be discussed.

2.6.6 Strategic risk management (SRM)

Risk management strategies are not the same strategic risk management. Strategic risk management (SRM) has been referred to as the upside of ERM by SCOR (2009:17). This entails determination of risk appetite and risk tolerance while optimising risk reward (Frigo & Anderson, 2011:60–61). Strategic objectives cited in the COSO ERM framework have been defined by COSO as high-level goals, aligned with and supporting the organisation's mission. Since strategic objectives form a major part of the organisation's strategy. Events that inhibit an organisation's strategy could be referred to as strategic risks (COSO, 2004).

There is therefore a relationship between strategic risk management (SRM) and enterprise risk management (ERM), as SRM is part of ERM. SRM is consequently a critical part of an organisation's overall ERM process (Frigo & Anderson, 2011:61).

In line with the observation above, Frigo and Anderson (2011:61) define SRM as:

a process for identifying, assessing and managing risks and uncertainties, affected by internal and external events or scenarios that could inhibit an organization's ability to achieve its strategy and strategic objectives, with the ultimate goal of creating and protecting shareholder and stakeholder value. It is a primary component and necessary foundation of ERM.

Risk & Insurance Management Society (RIMS) (2011:3) complements the above definitions in their description of SRM as encompassing the interdisciplinary intersection of strategic planning, risk management and strategy execution in managing risks and seizing opportunities, not only for protection against losses, but also for reducing uncertainties, thus enabling better performance in achieving the organisation's objectives and greater resilience in an uncertain environment. It can be concluded that an organisation that commits to manage its risks should begin this at strategic level as shall be deliberated on in the next chapter.

2.6.7 Conclusion

Chapter 2 reviewed risk management literature, starting off by defining key terms, risk, and risk management. Definitions as presented by different authors were examined, and significant terms analysed.

Upon discussing types of risks, it was observed that different authors have classified risk in different ways. These approaches were summarised and displayed in a table for ease of comparison (see Table 2.1). The literature review unveiled classification overlap with each classification and among different forms of classification. There is nonetheless no generally accepted classification as the classification depends on the type and size of organisation.

Chapter 2 moreover examined the risk management process and its various elements. Some of the significant elements highlighted were risk planning, risk identification, risk analysis, risk reporting and risk monitoring. Risk identification was seen as involving several methods such as checklists, flowcharts and SWOT analysis.

Risk management strategies were then examined. These were broadly classified as risk control techniques and risk financing techniques. Risk control techniques cater for physical risks and include risk avoidance or elimination and risk reduction. Risk financing techniques are mainly for financial risks and can also be classified broadly as risk retention and risk transfer.

Finally, strategic risk management (SRM) was discussed, thereby differentiating it from risk management strategies. SRM was considered as a component of ERM and accordingly, the section formed a link between Chapter 2, which discussed risk management, and Chapter 3, which discusses ERM.

The next chapter reviews literature on ERM. It examines standards and models of ERM. The COSO ERM framework is given in detail in this chapter as it was the model used in the study.

CHAPTER THREE

ENTERPRISE RISK MANAGEMENT

3.1 Introduction

Chapter 1 made clear the direction of the study by reference to the research objectives, statement of the research problem and a discussion of the methodology. Chapter 2 dwelt on risk and risk management. Chapter 3 now goes further than traditional risk management by examining enterprise risk management (ERM).

Chapter 3 starts by defining ERM. Different definitions by different authors are explored to encapsulate the major characteristics of ERM. Traditional risk management, which was discussed in Chapter 2, is then briefly compared with ERM in 3.1.2. This is meant to build a case for ERM as the designated area of this study.

This chapter further provides an overview of the key drivers to ERM and the benefits of an organisation adopting ERM, as taken from several authors. ERM standards and frameworks are discussed, examining how each suggests risk management should be approached. The discussion narrows down to the COSO ERM framework, which formed the basis of the study.

Chapter 3 examines several risk maturity models in chronological order, starting from the earliest and concluding with the latest. The models are evaluated individually, culminating in the development of the proposed ERMMF. Empirical studies on ERM are explored in terms of research methodology and findings. This was to assist the comparison with the methodology and findings of the current study.

3.1.1 ERM definition

ERM has been identified as synonymous with the following terms:

- enterprise-wide risk management (EWRM) (see Gupta, 2011);
- holistic risk management (HRM) (see Gupta, 2011);

- corporate risk management (CRM) (see Li, X., 2009);
- business risk management (BRM) (see Li, X., 2009);
- integrated risk management (IRM) (See Qiao, 2007); and sometimes even
- strategic risk management (SRM) (Qiao, 2007) ERM is further defined by different authors and organisations.

BS 31100 (2008) defines ERM as the approach to manage all of an organisation's key business risks and opportunities with the intention of maximising stakeholder value. The Casualty Actuarial Society (CAS) (2003) defines ERM as a discipline by which an organisation in any industry assesses, controls, exploits, finances and monitors risks from all sources for the purpose of increasing the organisation's short- and long-term value to its stakeholders. These two simple definitions do not however seem to differentiate ERM from traditional risk management.

The Association of Corporate Treasurers (ACT) (2006), on the other hand, gives a detailed definition of ERM as a process designed to enhance corporate decision-making tools being developed and implemented to support actions ranging from optimisation of the insurance programme to analysing overseas expansions, business mix or capital allocation. While this definition puts ERM aside as a more detailed process than traditional risk management, it does not give a precise demarcation between the two.

One would actually argue that traditional risk management covers the same stages given by ACT. The definition by Alviunessen and Jankensgard (2009) presents ERM as a rigorous and coordinated approach to assessing and responding to all risks that affect the achievement of an organisation's strategic and financial objectives. This definition introduces elements of ERM by seeing the ERM as coordinated process, implying the involvement of many functions, not just the risk management department. This process has been seen as including consideration of all risks. Although not very clear, this element could mean that risks are examined holistically. Her Majesty's Treasury (2004) defines ERM as all the processes involved in identifying, assessing and judging risks, assigning ownership, taking actions to mitigate or anticipate them and monitoring and

reviewing progress. The definition brings the element of risk ownership, which is congruent with the ERM expectation that risk management is for everyone in the organisation.

Finally, COSO (2004) defines ERM as a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and to manage risks to be within its risk appetite to provide reasonable assurance regarding the achievement of the objectives of the entity.

COSO (2004) designates ERM as a continuous process, not a one-off event. It also adopts a holistic approach, involving everyone in the organisation, regardless of their position. ERM takes cognisance of the fact that risks are both upside and downside in nature (IRM, 2010). It can therefore be deduced that ERM is a process, and its components are implemented by people in the enterprise. ERM is applied by setting strategies across the overall enterprise, and concepts of risk appetite must be considered. However, Moeller (2011) expresses a disclaimer that, although ERM is designed to help in the achievement of objectives, it provides only reasonable, not positive, assurance on the achievement of objectives.

3.1.2 From traditional risk management to ERM

From the definition of ERM it is clear that it has certain attributes that put it a level higher than traditional risk management. ERM is an approach that looks at risk management holistically and as a process, as opposed to viewing it piecemeal or as an event (Krstic & Dordevic, 2012:152). Risk policies are framed at board level and where necessary, the board can delegate the responsibility to a committee of non-executive directors. A proper management structure is put in place to manage risk and a CRO is appointed to set up risk control objectives and a risk framework and to design ways to measure risk. Risks are embedded in business management and a risk culture developed. Risk management is thus taken as part of the corporate training curriculum (Dun & Bradstreet, 2007:163; Krstic & Dordevic, 2012:152). It is at this level of risk

management that risk is not only viewed as having a negative connotation implying damage or loss, but is also seen as an opportunity to benefit and achieve success in business (Krstic & Dordevic, 2012:152). It has been considered a new paradigm in risk management (Simkins & Ramirez, 2008:581).

Olso and Wu (2007) made a tabular comparison between traditional risk management and ERM. Table 3.1 compares traditional risk management with ERM in a way that summarises the points discussed in the preceding paragraph.

Table 3.1: Risk management vs ERM

Traditional risk management	ERM
Risk as individual hazards	Risk viewed in the context of business strategy
Risk identification and assessment	Risk portfolio development
Focus on discrete risks	Focus on critical risks
Risk mitigation	Risk optimisation
Risk limits	Risk strategy
Risks with no owners	Defined risk responsibilities
Haphazard risk	Monitoring and measurement of risks
“Risk is not my responsibility”	“Risk is everyone’s responsibility”

Source: Olso and Wu (2007:5)

3.1.3 Why ERM

Adoption of ERM assists in the reduction of financial losses, improves business performance, encourages regulatory compliance and results in risk accountability by an organisation (Chapman, 2011:10–11; KPMG International, 2006; PwC, 2008). ERM further supports value creation and the alignment of an entity’s documented strategy and objectives with the risk management plan. Communication of the strategy, objectives and risk management plan is facilitated throughout the organisation when ERM is in place (Marchetti, 2012:11–13). There is further reduced cost of funding and saving through an integrated approach to compliance. In addition, ERM supports a good

corporate governance process that increases confidence of stakeholders and regulators (Chapman, 2011:10–11).

The benefits outlined above are believed to result in the boosting of confidence in stakeholders and the investor community who, mainly due to recent global financial crisis, are focused on and eager to learn about the capabilities of the organisation for understanding and managing risk (Chapman, 2011:10–11).

3.1.4 Key drivers of an ERM approach

ERM has been gaining significant momentum in recent years (Segal, 2011:9). This has come as a result of the highly publicised business failures, scandals and frauds over the past several years. The events have called for senior managers to comply with a series of laws and regulations, and listing standards to require strengthened corporate governance and risk management in organisations.

The global financial crisis that began in the United States in 2007 stirred the world, and risk management became a subject of concern. Organisations began to relook at their ERM systems to identify areas that needed reinforcement. The crisis, which similarly affected the insurance industry (Van Vuuren, Reyers & Van Schalkwyk, 2017:132), acted as proof that financial institutions lacked the best risk management practices which they claimed to have (Borghesi & Gaudenzi, 2012:13). An attempt to survive the crisis was then made by many organisations thereby advancing their application of ERM. Subsequent to the crisis, the Securities and Exchange Commission (SEC) disclosure regulation and the Dodd–Frank legislation were introduced to ensure implementation of ERM by organisations (Khan, Hussein & Mehmood, 2016:1887).

ERM has further received much attention owing to rapid changes in the business environment. Organisations now face unparalleled challenges as they compete in a progressively global, unstable and regulated corporate setting. Meeting customer requirements, managing composite supply chains, employing strategic alliance partners, and warranting effective and efficient internal business processes are getting

increasingly difficult, despite today's high-level, instantaneous information systems (Cheese, 2016:325–330; Tummala & Schoenherr, 2011:474). This means the organisations must be resolute in their ERM processes to keep up with the market.

Many financial institutions, lenders and other stakeholders have also launched a request for information regarding an entity's internal controls forcing the boards of directors of many entities to interrogate financial reports regarding risk management and internal control issues (Marchetti, 2012:9). Rating agency scrutiny of company ERM programmes, which was highly significant in 2005, led to ERM being one of the major criteria to determine insurance companies' credit rating globally. Subsequently, all other sectors became aware of the need to advance their ERM programmes (Deighton, Dix, Graham & Skinner, 2009:16; Segal, 2011:10–11).

3.2 ERM-related standards and frameworks

A risk management standard sets out the overall approach to the successful management of risk, including a description of the risk management process, together with a suggested framework that supports that process (Hopkin, 2010:53).

There are a number of established risk management standards. The first standard was developed by the standards body in Australia in 1995 (Australian and New Zealand risk management standard [AS/NZS], 2009), and was followed by others developed in other countries. Observations are that some standards are more widely used than others, probably because organisations tend to select the approach that is most relevant to their particular circumstances (Hopkin, 2010:53). Some of the widely used risk management standards are discussed in the following paragraphs.

3.2.1 Basel III

Basel III is the third version of the Basel accords whose implementation started in 2013 and is anticipated to be full-fledged in the course of 2018. Its aim is to reinforce worldwide capital and liquidity rules in an attempt to promote a more irrepressible banking sector (BCBS, 2010). The reform compendium incorporates several lessons

learned during the 2007/8 global financial crisis with the aim to improve risk management and governance while reinforcing transparency and disclosure (BCBS, 2010).

Basel III sets suitable levels of liquidity for banks and builds guarantees of solvency through bank-level regulation (BCBS, 2010). While earlier versions of the Basel accords attempted to address basically the same risks, their exertions were considered inadequate. Basel III developed on the foundation of the earlier Basel accords emphasises the need to strengthen regulation, supervision and risk management (BCBS, 2010). With three pillars, Basel III raises the quality and quantity of the capital base required for the banking sector which strives to regulate leverage to acceptable levels (BCBS, 2010). Basel III requires the bank to determine capital needs for counterparty credit risk through use of what they call 'stressed inputs'. It also requires standards that are tight in order to manage collateral and margining periods.

3.2.2 Solvency II

Solvency II has been regarded as the world's leading standard, which requires insurers to focus on managing all the risks facing their organisations (Institute and Faculty of Actuaries [IFoA]). It offers insurers an opportunity to improve their risk-adjusted performance and operational efficiency. Although originated for the European market (see Solvency II, 2007), Solvency II has not only become the reference point for insurance companies in Europe but also for insurance companies across the globe. It adopts a vigorous risk-based approach and advocates for a non-zero failure regime (Institute and Faculty of Actuaries [IFoA], 2016:2; KPMG, 2015:1–4; Solvency II, 2007). Solvency II consists of three pillars: Pillar 1, Pillar 2 and Pillar 3. These are discussed in the paragraphs below.

Pillar 1 comprises all the quantitative requirements. This pillar aims to ensure firms are adequately capitalised with risk-based capital. All valuations in this pillar are to be done in a prudent and market-consistent manner whereby companies may use either the standard formula approach or an internal model approach (Solvency II, 2007).

Pillar 2 is intended for qualitative requirements that focus on higher standards of risk management and governance within the organisation of a firm. This pillar also gives supervisors greater powers to challenge their firms on risk management issues. Insurers are required to carry out an own risk and solvency assessment (ORSA) and this is required to be reviewed by the supervisor (Solvency II, 2007).

Pillar 3 requires high levels of transparency for supervisors and the public. There is a private annual report to supervisors, and a public solvency and financial condition report, which increases the level of disclosure required by firms (Solvency II, 2007). Figure 3.1 depicts Solvency II and the three pillars that have been described.

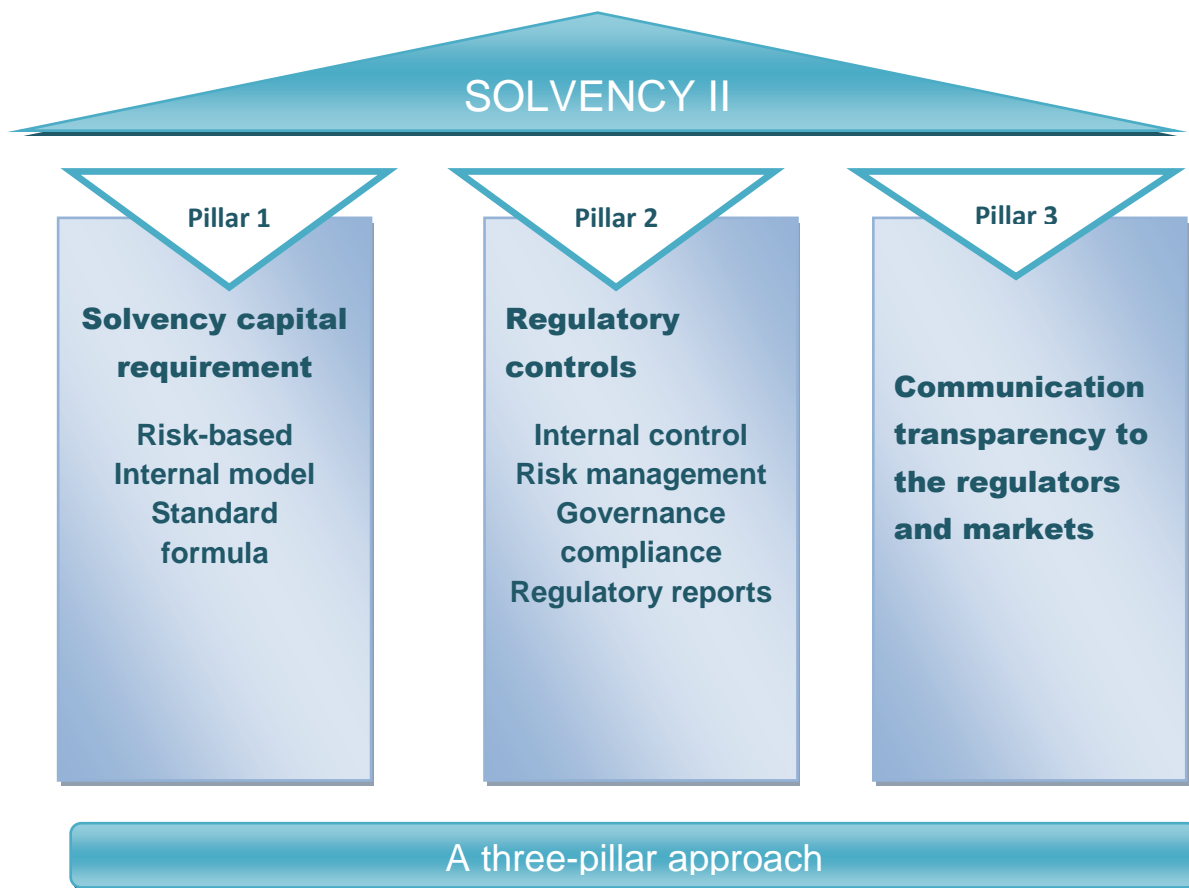


Figure 3.1: Solvency II

Source: KPMG (2015)

The current research acknowledges that Solvency II is a vibrant approach to risk management as it brings into consideration both quantitative and qualitative measures of performance in the area of risk management. This could help cover all risk aspects based on past results reflected by the financial statements and the future outlook, which is determined qualitatively. However, this model was not used as a basis for the development of the proposed ERMMF due to the challenges it poses as discussed in Chapter one. Much apprehension has been expressed by organisations about the complex Solvency II standard formula calculation, which demands a huge amount of input data. Furthermore, Solvency II has been cited as a regulatory burden for players in the insurance industry given its umbrella approach that leaves different national

regulatory bodies to customise it to their local situation (Aon, 2014:3–5; Deloitte, 2015:4–5; Vienna Insurance Group, 2015:21).

3.2.3 ISO 31000

Like most other ISO management standards, ISO 31000 provides a structured framework intended to meet the needs of any type of organisation or situation (AS/NZS, 2009). According to the standard, effective risk management results from the application of a very systematic and structured management process (Lalonde & Boiral, 2012:273). Each organisation should identify all the risks, the nature of the risks, the circumstances or events promoting their occurrence, the potential consequences, inter alia, in terms of the objective of the organisation for achieving its mission (AS/NZS, 2009). A list of risks should be established and each risk should be assessed with regard to the available information. After the identification and analysis of risks, the organisation should determine those risks for which explicit measures will be taken and those which will be accepted as residual risk (Lalonde & Boiral, 2012:273). Figure 3.2 shows the framework for managing risks based on ISO 31000. The framework indicates the need to design a risk management framework which will give the background of the organisation as well as its internal and external environments. A risk management policy should then be drafted and the risk management process implemented thereafter. The risk management framework is to be reviewed periodically, leading to its continuous improvement (AS/NZS, 2009).

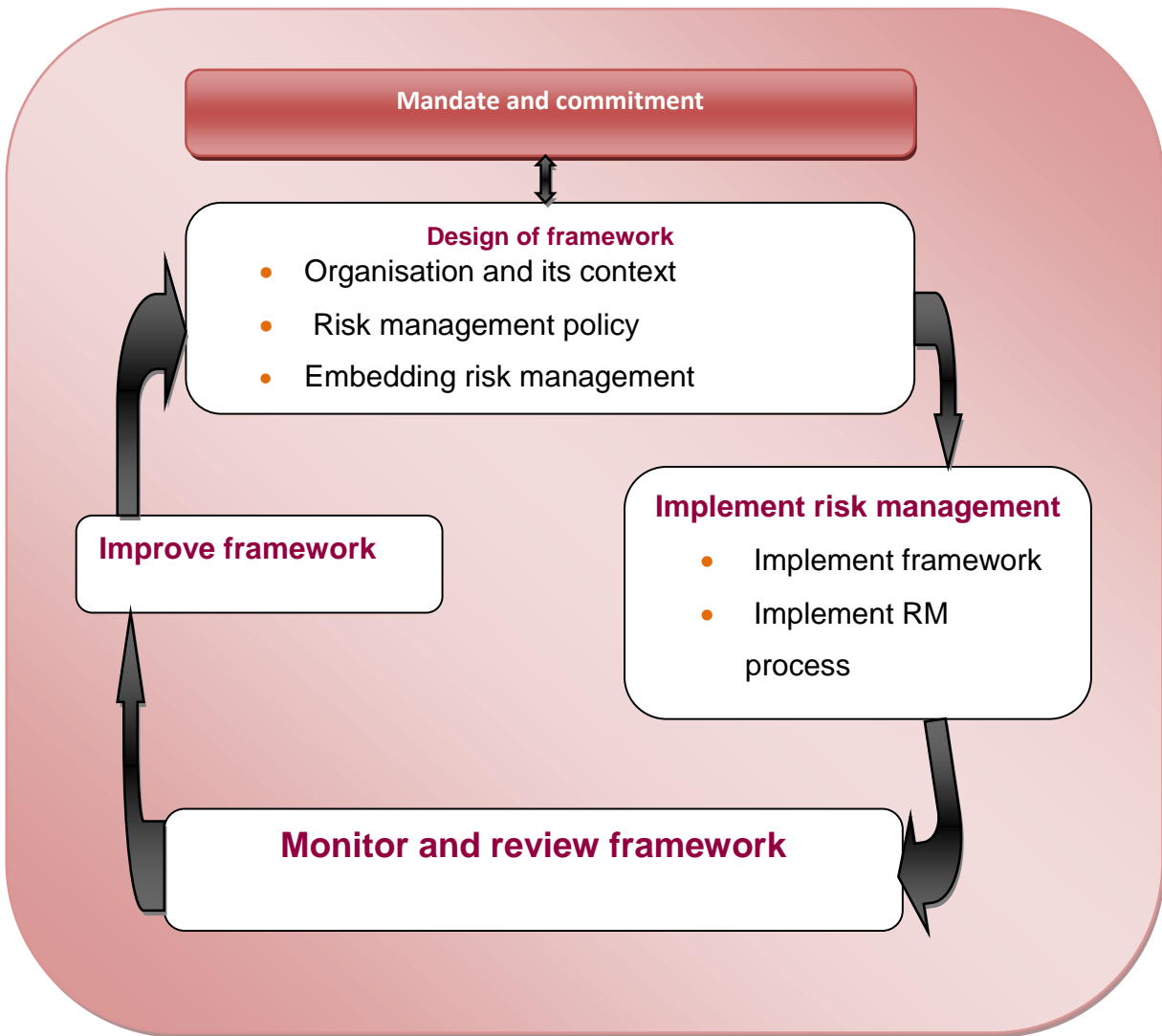


Figure3.2: Framework for managing risks based on ISO 31000

Source: AIRMIC, ALARM and IRM – extracted from ISO 31000 (2009)

ISO 31000 concurs with the ERM practices as ISO 31000 is noted for its pronounced emphasis on continual improvement in risk management and comprehensiveness (Lalonde & Boiral, 2012:273). ISO 31000 advocates for everyone to be involved in the organisation through continual communication. In spite of the good qualities highlighted, the researcher maintains that ISO 31000 is not as comprehensive and simple as COSO’s ERM model. Moody (2012) confirms this by saying that ISO 31000 is good for

use as a foundation for developing risk processes. This implies that it would not make a comprehensive framework for measuring ERM.

3.2.4 British Standard BS 31100

This standard was published by the British Standard Institute in 2008 and put much weight on the requirement for a risk management framework to support the separately described risk management process (British Standard Institute [BS], 2008). BS 31100 is intended to be a guide to risk management principles, models, frameworks and processes to assist organisations to achieve their objectives through effective risk management. BS 31100 states that the risk management process should provide a systematic, effective and efficient way by which risks can be managed at different levels throughout the organisation (Hopkin, 2010:59–60). The standard outlines a framework, which it portrays as a set of sections that stipulate the essential principles and organisational measures for designing, implementing, monitoring, reviewing and continually improving risk management processes throughout the organisation (BS, 2008). The foundations include the objectives, a mandate and commitment to managing risk (strategy), while the organisational arrangements include plans, relationships, accountabilities, resources, processes and activities (architecture) (Hopkin, 2010:59–60).

While Hopkin argues that the risk management framework is clearly implanted within the organisation's overall strategic and operational policies and practices (protocols) (Hopkin, 2010:59), the current research observed that BS 31100 does not show a clear step-by-step process that aids organisations in the implementation of ERM. However, it can be used as a foundation for introducing risk management in an organisation (Hopkin, 2010:60).

3.2.5 A risk management standard (AIRMIC, ALARM, IRM)

This standard was produced jointly by AIRMIC, ALARM and the IRM in 2002 and is one of the most widely used risk management standards (Hopkin, 2010:59). It is a high-level

approach aimed at non-risk-management specialists and has been translated into many languages (Hopkin, 2010:60).

Risk management is seen to be protecting and adding value to the organisation and its stakeholders through supporting the objectives of the organisation. Risk management has been documented by the standard as affording a framework for an organisation that empowers imminent activity to take place in a dependable and meticulous manner (Hopkin, 2010:61). Risk management assists in improving decision-making, planning and prioritisation as it is deemed comprehensive and structured in nature, among other things. Figure 3.3 shows the IRM standard risk management process. The board is considered to play a significant role in being part of strategic objective setting. To complement the role of the board, the business units and audit function are part of the risk management process.

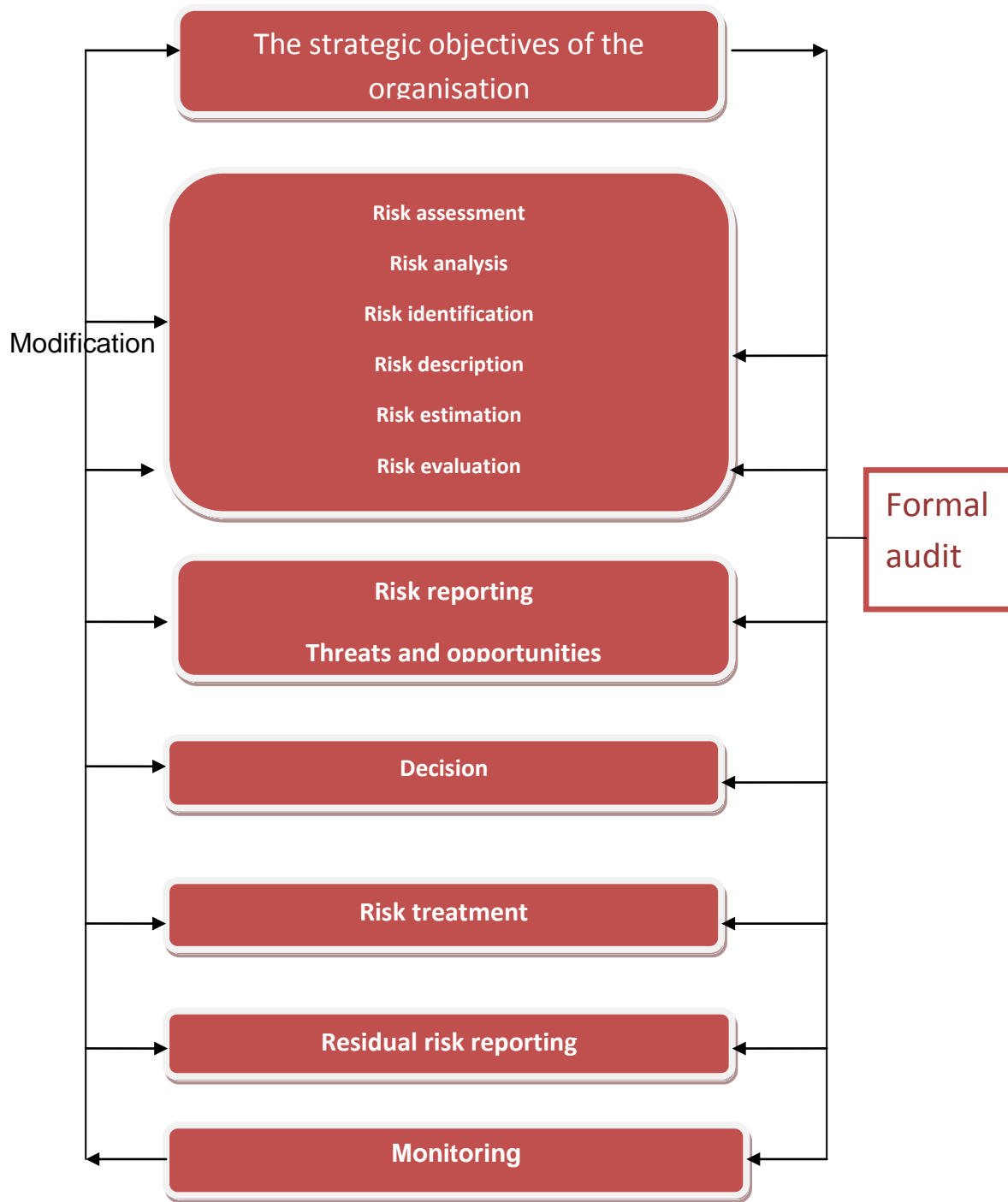


Figure 3.3: Risk management process

Source: IRM (2002)

This standard is comprehensive and has the potential to form a basis for the development of an ERMMF. In the researcher's view, its 14-page document (compared to the 125-page document of COSO) does not expand much on processes and meaning of particular terms. It may thus be ambiguous to many users. The framework further addresses upside risk while not giving attention to downside risk. The research used the COSO framework, which was developed two years after the risk management standard (i.e. in 2004) as the former contains much detail and considers both upside and downside risk.

3.2.6 The Federation of European Risk Management Associations (FERMA)

The FERMA risk management standard (see FERMA, 2003) was published in 2003, integrating the frameworks from previous professional standards established in the United Kingdom. FERMA's standard is based on the frameworks proposed by the Institute of Risk Management (IRM), the Association of Insurance and Risk Managers (AIRMIC), and the National Forum for Risk Managers in the Public Sector (ALARM) in 2002. The FERMA standard asserts that risk management must be an evolving process flowing within the entire strategy of the organisation. Additionally, the standard maintains that the risk management strategy must be translated into tactical and operational objectives.

3.2.7 OCEG 'Red Book' 2.0:2009

The capability model of the Open Compliance and Ethics Group (OCEG) depends profoundly on an integrated technology platform as a supporting tool to identify and assess risk for prevention or reduction purposes (OCEG, 2009). The approach maintains formal integration of the governance, risk and compliance processes, preferably buttressed by a shared technology programme. The framework assigns a limited role to risk focused on identification and measurement. Measurement of the likelihood of events that have an adverse effect on objectives is the primary way of handling risk (OCEG, 2009). The 'Red Book' (see OCEG, 2009) however does not seem to emphasise the ownership of risks by different organisational functions.

3.2.8 Turnbull Report

The Turnbull Report (United Kingdom) was produced by the Financial Reporting Council in 2005 (Financial Reporting Council [FRC], 2005). The Turnbull Report is considered by the Securities and Exchange Commission (SEC) in the United States to be an acceptable alternative to the COSO internal control framework (FRC, 2005). Its focus is on effective risk management and not the elimination of risk. It thus encourages organisations to create risk management systems that can continually adapt to changing circumstances. In light of its contents, the Turnbull Report could be used as a benchmark when using COSO.

3.2.9 King IV Report on Corporate Governance

ERM thrives where there are proper corporate governance practices (Organisation for Economic Co-operation and Development [OECD], 2014:12). Although King IV (2016) is meant for South African organisations, it is necessary to briefly discuss it at this point as it dwells on corporate governance which affects risk management. The Botswana market could learn several lessons from it. Leaders need to define strategy, provide direction and establish the ethics and values that would influence and guide practices and behaviour with regard to sustainable performance (OECD, 2014). A build-up on King IV assumes that all principles in King III have been applied and therefore demands that entities explain how the principles have been applied. The principles require that the board of directors act as the focal point for corporate governance, and it should ensure that the company acts as and is seen to be a responsible corporate citizen (King IV, 2016). The board should cultivate and promote an ethical corporate culture and also appreciate that strategy, risk, performance and sustainability are inseparable. King IV underscores principles and outcomes as opposed to King III, which was based on rules (See King III, 2009; King IV, 2016). King IV further accentuates that corporate governance must be oriented towards ethical leadership, attitude, mind-set and behaviour (King IV, 2016). This can be revealed through transparency and appropriate disclosures.

From the discussion in the above paragraph it could be deduced that if King IV guidelines are followed, the risk culture might be easy to cultivate in an organisation. Implementation of ERM might be natural to the organisation.

3.2.10 COSO ERM

This framework was produced by the Committee of Sponsoring Organisations of the Treadway Committee. COSO comprises representatives from: –

- IMA (the Institute of Management Accountants);
- AICPA (American Institute of Certified Public Accountants);
- AAA (American Accounting Association);
- FEI (Financial Executives International); and
- IIA (Institute of Internal Auditors).

PwC was instrumental in researching and developing the framework (Moeller, 2011: 3). The COSO approach is internationally recognised, and in many circumstances, mandated (Moeller, 2011: 3). The COSO ERM framework comprises all the items in the earlier COSO International Control framework of 1992 (Ibid.). An ERM version of the COSO framework was produced in 2004, which has both risk management and internal control within its scope. The goal of the COSO ERM framework is to enable organisations to have a consistent definition of ERM that will consider enterprise in a consistent manner (COSO, 2004).

The COSO ERM framework is three-dimensional with eight elements of risk components, four risk management objectives and multiple entity and unit level components.

The ERM Integrated Framework balances control objectives with the required control components necessary to maintain effective internal control within a company, process, or function (COSO, 2004). Figure 3.4 illustrates the COSO components of ERM.

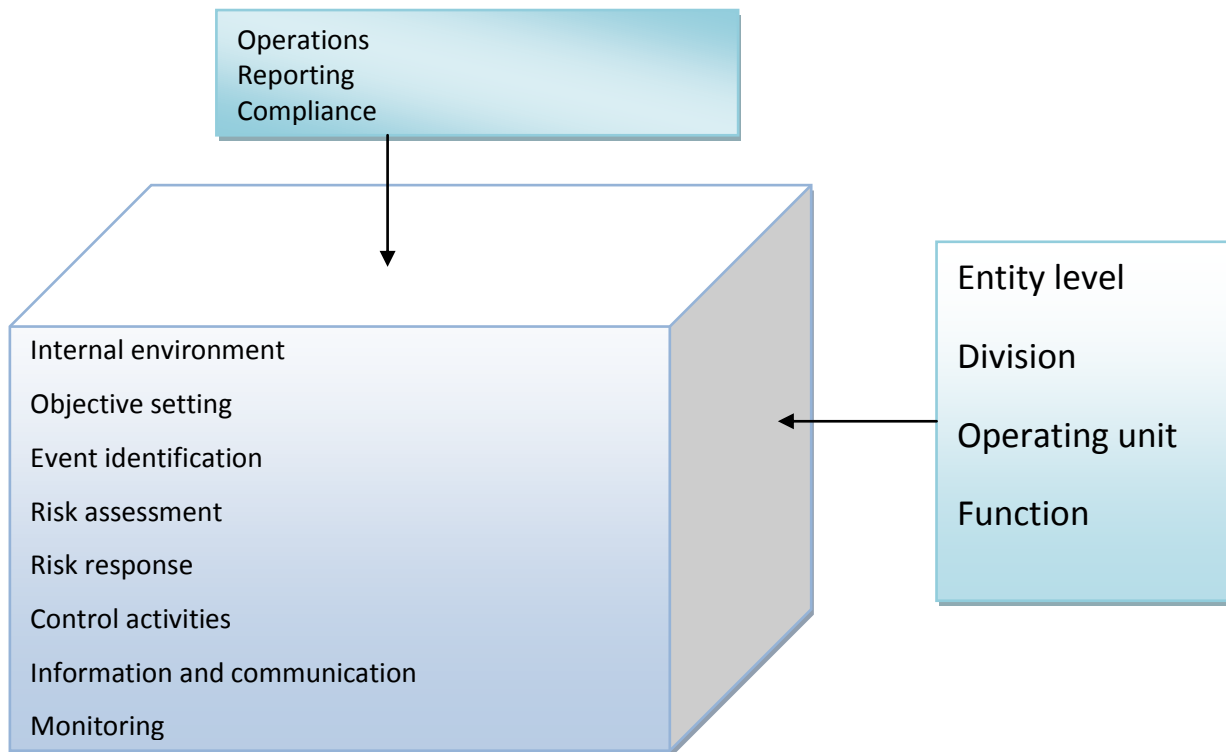


Figure 3.4: The COSO components of ERM

Source: Adapted from COSO, 2004

From Figure 3.4, it is clear that the ERM Integrated Framework consists of eight interrelated components as follows:

Internal environment – the internal environment encompasses the tone of the organisation and sets the basis for how risk is viewed and addressed by the personnel of the entity, including risk management philosophy and risk appetite, integrity and ethical values, and the environment within which they operate (Hopkin, 2010:35).

Risk management philosophy is a set of shared attitudes and beliefs which tend to characterise how the enterprise considers risk in everything it does.

Risk management allows managers and others at all levels to respond to high-risk proposals with caution (Moeller, 2011:57).

Risk appetite is the amount of risk an enterprise is willing to accept in the pursuit of its objectives (Hopkin, 2010: 26). It is recommended for all management levels to have a general understanding of the concept of risk appetite. The component of integrity and ethical values requires much more than a published code of conduct (Krstic & Dordevic, 2012:162). Risk management philosophy includes strong integrity and standards of behaviour for members of the enterprise (Hopkin, 2010:26). There is a need for a strong corporate culture that guides the enterprise at all levels in making risk-based decisions. This can be evidenced by a strong corporate mission statement as well as written codes of conduct. The environment within which organisations operate includes the organisational structure, which should have clear lines of authority, responsibility and reporting for the achievement of effective ERM (Moeller, 2011:61). There is a need for healthy corporate governance with the board of directors involved in risk-based decisions. There is also a need for employees to be competent enough to perform their tasks as assigned (Moeller, 2011:56–58; Olson & Wu 2010:15). The internal environment has been referred to as a strong foundation and a basis for all other components in the framework (Ciorciari & Blatner, 2008:8).

Objective setting – objectives must exist before management can identify potential events affecting their achievement (Hopkin, 2010:28). ERM ensures that management has a process to set objectives in place, that the chosen objectives support and align with the mission of the entity, and that they are consistent with its risk appetite.

An enterprise must establish a series of strategic objectives covering its operations, reporting and compliance activities ((Moeller, 2011:57). These, being at a high level, must be aligned with the enterprise mission. A mission statement is a crucial element in the strategic planning as it creates a general, formalised statement of purpose, and it can be a building block for an overall strategy and development of more specific functional strategies (Ciorciari & Blatner, 2008:12). A properly planned mission statement allows an enterprise to develop high-level strategic objectives to achieve its mission and then to select, develop and implement a series of operations, reporting and compliance objectives (Moeller, 2011:62–65).

Event identification – internal and external events affecting achievement of an entity’s objectives must be identified, distinguishing between risks and opportunities. Opportunities are channelled back to management’s strategy or objective-setting process (Marchetti, 2012:36. Events, which can be internal or external to an enterprise, affect the implementation of the ERM strategy or the achievement of its objectives. These can be positive, negative or both.

External events can be economic, natural, environmental events or political events, social events and technological events. **Internal** events will include infrastructure events and internal process-related events. Such events can be identified by the use of event inventories, workshops, interviews, questionnaires, process flow analysis and loss event data tracking (Marchetti, 2012:36; Moeller, 2011:66–70).

Risk assessment – risks are analysed, considering the likelihood and effect, as a basis for determining how they should be managed. Risks are assessed on an inherent and a residual basis.

Inherent risk is the potential for waste, loss, unauthorised use or misappropriation due to the nature of an activity itself. Factors that affect the inherent risk of any activity within an enterprise are the size of its budget, the strength and sophistication of the management of the enterprise, and the very nature of its activities. This kind of risk normally stems from external factors and is ordinarily outside the control of management.

Residual risk is the risk that remains after management had responded to risk threats and countermeasures had been applied. There is a need to consider the likelihood and effect of risks further (Marchetti, 2012:38–40; Moeller, 2011:71–73).

Risk response – management selects risk responses (by avoiding, accepting, reducing or sharing risk) and develops a set of actions to align risks with the risk tolerances and risk appetite of the entity.

Avoidance involves walking away from risks by simply doing away with the event attracting the risk. Reduction can be done across organisational levels. Sharing takes place through purchasing insurance or hedging operations to protect against possible price fluctuations. Acceptance is a strategy of risk accommodation, for example through self-insurance (Moeller, 2011:74–75). The following table (Table 3.2) shows actions that are taken after weighing the likelihood of risks.

Table 3.2: Risk matrix

Likelihood of risk	Low	Medium	High
Level of risk →High	Hedge	Avoid	Avoid
Level of risk →Medium	Control internally	Hedge	Hedge
Level of risk →Low	Accept	Control internally	Control internally

Source: Adopted from Moeller, 2011

This is followed by the risk management process and the risk review process (Smiechewicz, 2001: 21–27, cited in Olso & Wu 2010: 15–17).

Control activities – policies and procedures are established and implemented to help ensure the risk responses are carried out effectively.

Such activities are necessary to ensure that risk responses are executed in a timely and efficient manner.

The first step to take is to develop a strong understanding of the identified significant risks and to develop control procedures to monitor or correct these risks.

The second step entails creating testing procedures to determine whether those risk-related control procedures are working effectively.

Thirdly, tests of the control procedures must be performed to determine whether the risk-monitoring process tested is working both effectively and as expected.

Lastly, adjustments should be made as necessary to improve risk-monitoring processes.

Some of the control areas include top-level reviews, direct activity management, information processing, physical controls, performance indicators and segregation of duties (Moeller, 2011:78–81).

Information and communication – relevant information is identified, captured, and communicated in a form and time frame that will enable people to carry out their responsibilities. Effective communication also occurs in a broad sense, flowing down, across and up the entity.

The information and communication component can be thought of in terms of information technology strategic and operational information systems. It can also be thought of in terms of ERM communication as shown in Figure 2.1 (Moeller, 2011:83). Information which may be financial or non-financial, and quantitative or qualitative must then be processed and refined for dissemination to appropriate individuals and/or groups. The information supports employees in performing their risk management duties and activities. According to the COSO framework, communication must convey effectively the importance and relevance of ERM, the objectives of the entity, the risk appetite and risk tolerance of the entity, a common risk language, and the roles and responsibilities of personnel effecting and supporting the components of ERM (Marchetti, 2012:45).

Monitoring – the ERM of the entity is monitored and modifications made as necessary. Monitoring is accomplished through ongoing management activities, separate evaluations or both. Monitoring includes activities such as implementation of strong and ongoing management reporting mechanisms, such as cash positions, unit sales and other key financial and operational data. Another activity comprises reporting processes installed to monitor key aspects of established risk criteria specifically, for example consideration of error rates and items held in suspense. Reporting should emphasise periodic trends and comparisons. The current and periodic status of risk-related findings and recommendations from internal and external audit reports should be considered. There is also a need to ensure updated risk-related information from sources such as government-revised rules, industry trends and general economic news further (Marchetti, 2012:38–40; Moeller, 2011:84–86). The interrelatedness of the COSO ERM components can be demonstrated as shown in Figure 3.5.

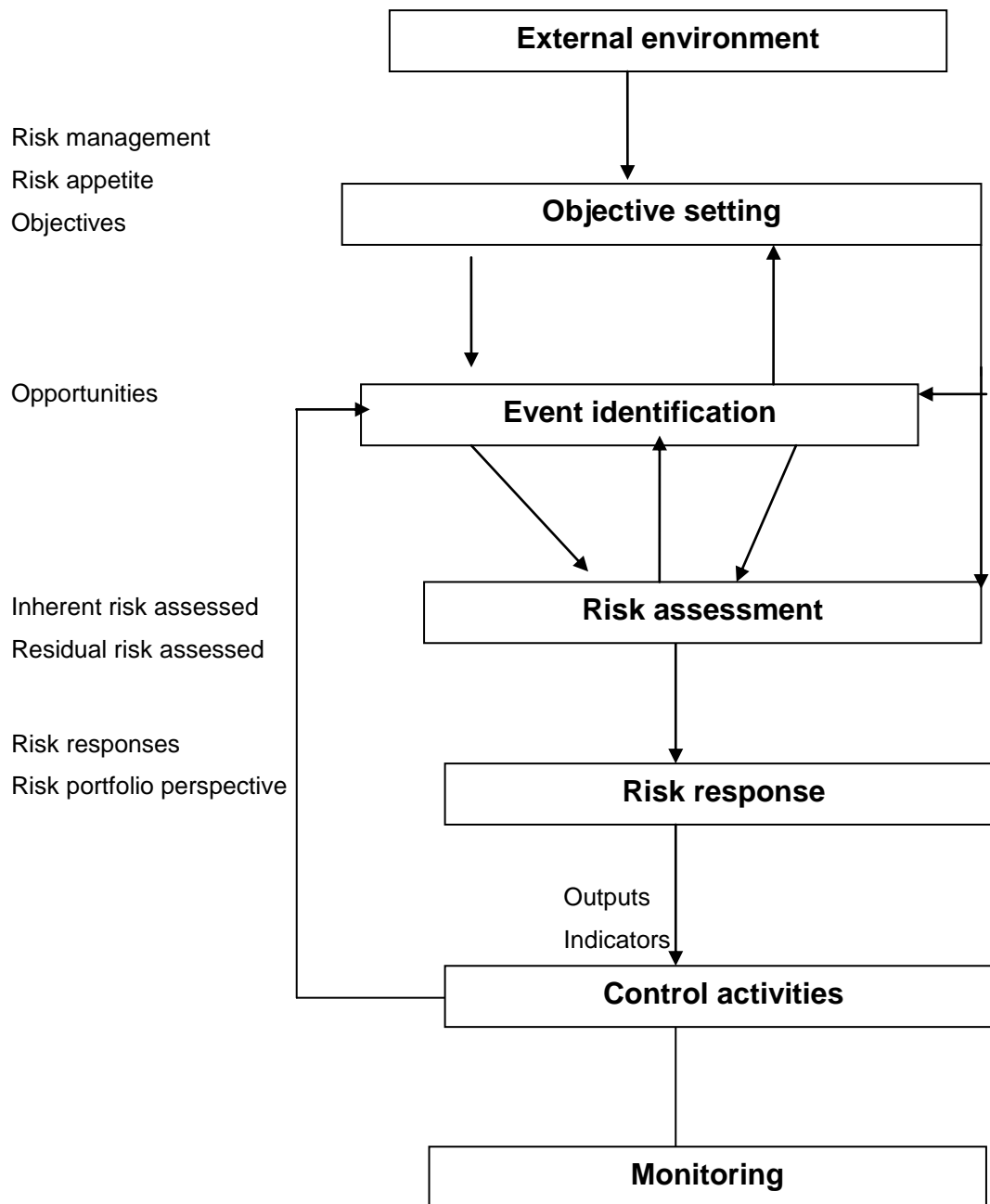


Figure 3.5: Information and communication flows across ERM components

Source: Moeller (2011).

Figure 3.5 shows that objectives are set while putting the external environment into consideration. Events that present opportunities to facilitate meeting of objectives are then identified. Risks linked to each event are analysed to determine to what extent to

pursue the opportunities. A risk response is assigned to each of the identified risks. The outcome is monitored through control activities (Moeller, 2011:26).

The COSO framework also outlines objectives in four major categories:

- strategic – high-level goals aligned with and supporting the mission of the organisation;
- operations – effective and efficient use of the resources of the organisation;
- reporting – reliability of reporting; and
- compliance – compliance with applicable laws and regulations (COSO, 2004).

Since ERM has to be embedded in the organisational objectives this classification of objectives emphasises the fact that ERM is for all levels of the organisation. There is a need for involvement of every function of the organisation in the implementation of ERM.

The framework groups entity objectives into four categories; subsidiary level, business unit level, division level and enterprise level. A particular objective may overlap certain categories, but the four categories allow an organisation to focus on these separate objectives for purposes of ERM (Frigo & Anderson, 2011:61).

The framework further suggests that the entity and unit levels could include the following, depending on the enterprise:

- subsidiary level;
- business unit level;
- division level; and
- enterprise level.

3.3 Comparing and contrasting the risk management standards and frameworks

It is vital to understand what standards are and what they are not. There is often confusion as to what a standard is and what a regulation is. A standard is essentially voluntary, while a regulation is mandated through legislation (RIMS, 2011:5). RIMS summarises risk management standards and frameworks in a table. Each cell of the table will be discussed in the paragraphs after the table.

Table 3.3: Standards comparison overview

STRATEGY FOCUS	DESCRIPTION	STANDARDS/GUIDELINE
ORGANISATIONAL OBJECTIVES	Designed to improve the ability of an organisation to meet or exceed its objectives through enhanced decision-making and activities that address key uncertainties.	ISO 31000:2009 BS 31100:2008 COSO (2004) FERMA (2002)
COMPLIANCE & CONTROL OBJECTIVES	Seeks to assure the transfer or other mitigation of risks primarily through compliance and control objectives and activities; often based on historic losses, etc.	OCEG 'Red Book' 2.0 (2009) COSO (2004)
REGULATORY ELEMENT	Used when an organisation must apply a designated practice and/or standard and provide evidence in order to meet regulatory requirements.	SOLVENCY II BASEL II

Source: Adopted from RIMS (2011).

Based on the review by RIMS, all the standards and frameworks are comparable in a number of ways. They necessitate embracement of an enterprise approach whereby the senior management champion the risk management process while involving all organisational functions (RIMS, 2011). All the standards entail an organised procedure of the required processes. Furthermore, the standards are congruent in the understanding of and accountability for delineating risk appetite and acceptable tolerance boundaries. The standards require formal records of risks in risk assessment pursuits and properly communicated risk management expectations in the organisation (ibid.). Finally, the standards insist on monitoring the risk management process thereby making the ERM process a cycle. ISO 31000, BS 31100, FERMA and COSO have been seen as objective-based (RIMS, 2011). They were all proposed to improve the

ability of an entity to meet or go beyond the expectations of its objectives through enhanced decision-making.

On the other hand, RIMS (2011) highlighted Solvency II and Basel III as regulation-based. Solvency II and Basel III are proposed for use when an organisation must apply a designated practice and provide evidence in order to meet regulatory requirements. In other words, both are regulation-driven. However, while Solvency II was developed specifically for insurance organisations (Solvency II, 2007), Basel III was designed for the banking sector (Basel III, 2010). The current study however used the COSO ERM framework as a basis for the proposed ERMMF and not the later-developed Solvency II due to the professed straightforwardness and inclusiveness of the COSO ERM framework. Organisations in both developed and developing countries have encountered challenges linked to the utilisation of the Solvency II guidelines (Aon, 2014; Deloitte, 2015).

The inclination of both the OCEG 'Red Book' and COSO's inclination is towards compliance and control objectives in that both emphasise the mitigation of risks as an avenue to compliance.

3.4 Overview of risk maturity models

Risk maturity effectiveness in an organisation can be measured by the use of risk maturity models that indicate the quality of risk management activities and the extent to which these are embedded within the organisation (Hopkin, 2007:45).

The strategic approach to risk management demands organisations to perform risk management activities appropriately and to introduce suitable risk management practices, especially at board level (Wieczorek-Kosmala, 2014:133). Accordingly, such models might be used in assessing the current stage of the risk management implementation and practice of an organisation (Ibid.).

Risk maturity models derive from the idea of capability maturity models (Humphrey, 1987; Paulk, Curtis, Chrissis & Weber, 1993) and are deemed beneficial for organisations that aspire to create or upgrade their current approach to risk management (Chapman, 2006:115), among other things.

A typical risk maturity model takes the form of a matrix showing the levels of maturity cross-referenced with the attributes reflecting the primary risk management practices (Wieczorek-Kosmala, 2014:134-5). The rows show the attributes (leading risk management systems), which are characteristically connected with the content of the risk management process (Office of Government Commerce [OGC], 2007:121). The columns show the levels of risk management practices in their sequences.

Risk maturity models generally delineate four or five levels of progression, and the quality of the risk management process within each level is defined by the selected attributes. The levels in the model are gradual in a measurable manner, thereby enabling the user of the model to determine the level of the risk management practices of the organisation (Hillson, 1997:38; OGC, 2007). A maturity model must enable the user to determine risk management competences that lack in an organisation (OGC, 2007). Determination of risk management competences should reflect the possible steps an organisation must take if the organisation is lacking. Higher levels of maturity on the other hand, reveal the highest managerial procedures and capabilities in the risk management process (Wieczorek-Kosmala, 2014:140).

Wieczorek-Kosmala (2014) suggests that an application of risk maturity models in examining the existing level of risk management implementation may be unclear as it is probable that an organisation will reach different levels of maturity in each attribute, which may make the final judgement difficult. Hopkin (2010:26), however, maintains that the overall assessment is only as high as the weakest criterion among the evaluated criteria. This implies that a developed risk-reporting structure at board level will bring no effects if the risk identification and assessment are poorly driven, for example. The following sections discuss several maturity models.

3.4.1 Hillson's model

Hillson's model (1997) is composed of four levels addressing four attributes: naïve, novice, normalised and neutral.

Naïve – although a risk management process may have been initiated, its design or application is fundamentally flawed. At this level, it is likely that the process does not add value.

Novice – the risk management process influences decisions taken by the project team in a way that is likely to lead to improvements in project performance as measured against the objectives of the project. However, although the process may add value, weaknesses in either the process design or its implementation result in significant benefits being unrealised.

Normalised – the project risk management process is formalised and implemented systematically. Value is added by implementing effective management responses to significant sources of uncertainty that could affect the achievement of project objectives.

Neutral – the risk management process leads to the selection of risk-efficient strategic choices when setting project objectives and choosing between options for project solutions or delivery. Sources of uncertainty that could affect the achievement of project objectives are managed systematically within the context of a team culture conducive to optimising project outcomes.

3.4.2 Hopkinson's model

Hopkinson's model was developed based on the levels presented by Hillson (2000), and Hopkinson came up with six attributes as shown in Table 3.4. The model has only three levels, namely naïve, novice and normalised. The levels are as discussed in section 3.4.1.

3.4.3 Chapman's model

Chapman's model has three levels, namely initial, basic and standard.

Initial – the description of the initial level would imply that, at the initial level, the organisation typically does not provide a stable environment for developing and maintaining ERM. Such organisations frequently have difficulty making commitments that the staff can meet with an orderly risk management process, resulting in a series of crises (Paulk et al., 1993:7).

Basic – limited capabilities to identify, assess, manage and monitor risks.

Standard – notable capabilities and conscious efforts to address risk issues.

3.4.4 Aon model

The Aon model is more detailed than any of the models that have been discussed as it has five levels: initial/lacking, basic, defined, operational and advanced. The Aon proposal, which was developed by practitioners, also has nine detailed attributes (Aon, 2010:46–51).

Initial/lacking – Aon's description of this level is that component and associated activities are very limited in scope and may be implemented on an ad hoc basis.

Basic – the model has limited capabilities to identify, assess, manage and monitor risks.

Defined – there are sufficient capabilities to identify, measure, manage, report and monitor major risks, while policies and techniques are defined and utilised (perhaps independently) across the organisation.

Operational – there is a consistent ability to identify, measure, manage, report and monitor risks, and a consistent application of policies and techniques across the organisation.

Advanced – the model has a well-developed ability to identify, measure, manage, report and monitor risks across the organisation. The process is dynamic and able to adapt to changing risks and varying business cycles, and there is explicit consideration of risk and risk management. Table 3.4 shows a summary of the discussed models with their levels and attributes.

Table 3.4: Levels and attributes of risk maturity models

Model	Levels	Attributes
Hillson (1997)	Naïve Novice Normalised Neutral	Culture Process Experience
Hopkinson (2000)	Naïve Novice Normalised	Management Risk identification Risk analysis Risk control Risk review
Chapman (2006)	Initial Basic Standard	Culture System Experience Training Management
Aon (2010)	Initial/lacking Basic Defined Operation Advanced	Board-level commitment A dedicated risk executive in a senior-level position Risk management culture that encourages full engagement and accountability Engagement of all stakeholders Transparency of risk communication Integration of risk information into decision-making Use of sophisticated quantification methods Identification of new and emerging risks Risk management focused on extracting value

Source: Wiczorek-Kosmala (2014:141)

3.4.5 The capability maturity model

This model with five levels – initial, repeatable, defined, managed and optimising – was developed by Paulk et al. (1993). These are discussed in the following paragraphs.

The initial level – at the initial level, the organisation typically does not provide a stable environment for developing and maintaining ERM. Such organisations frequently have difficulty making commitments that the staff can meet with an orderly risk management process, resulting in a series of crises (Paulk et al., 1993:7).

The repeatable level – at the repeatable level, policies for managing a risk and risk management procedures to implement those policies are established. Planning and managing new risks is based on experience with similar risks. Process capability is enhanced by establishing basic process management discipline on a risk-by-risk basis.

The defined level – the description by the capability maturity model of the defined level suggests that at this stage, the standard process for developing and maintaining ERM across the organisation is documented, and these processes are integrated into a coherent whole. There is an individual or function responsible for ERM and such individual has some training in the area (Paulk et al., 1993:8).

The managed level – at the managed level, the organisation sets quantitative quality goals for risk management processes.

The optimising level – at the optimising level, the entire organisation is focused on continuous process improvement. The organisation has the means to identify weaknesses and to strengthen the process proactively, with the goal of preventing the occurrence of defects.

3.4.6 Deloitte risk management capability maturity model

The Deloitte risk management capability maturity model (also known as the **maturity model**) discusses five levels of ERM capability; ad hoc, fragmented, comprehensive,

integrated and strategic (Deloitte, 2014b). Deloitte (2014b) explain the levels as follows. At the ad hoc stage risk objectives are not defined in the organisation while at the fragmented stage risk management function exist in the organisation but are not integrated with other business units. At the comprehensive level risk management is embraced by the whole organisation and all risk types are examined. The integrated level further correlates risks and risks are treated as a portfolio. At the strategic level risk management is part of decision making. Risks are exploited in order to seize opportunities (Deloitte, 2014b:5).

3.5 Comments on risk maturity models

From all the risk maturity models presented above it is clear that the models assume that at the first level, organisations do not manage risk as they are not aware of the need for risk management and the benefits thereof. At this stage, there is therefore no risk management structure, and attempts by management to restrain risks are disordered, random and individually conducted, and not in any coordinated way. The levels of risk management maturity that follow reflect the progression in the development and enhancement of risk management systems.

At the second level, the organisation is typically trying out the risk management process although the organisation still has narrow competences to identify, assess, manage and monitor risk. The stages immediately after the second level generally may have adequate competences of risk management but still require a correct incorporation of risk management with all the functions of decision-making. At the maximum level of risk management maturity, conversely, a commitment by the management board is apparent through the embedment of risk management into all decision-making processes.

At the highest level of risk management maturity, board-level commitment to risk management means that the management board develops a risk management culture with the intention to create or increase risk awareness in an organisation and ensuring

that all business processes are risk-based. Learning at this level is expected to be continuous and the skills continue improving. Learning, however, is not expected to end as the environment has become volatile. At this stage, the management board is expected to steer effective risk reporting, combined with periodic reviews of risk.

3.6 Risk maturity models for Southern Africa

The sections that follow discuss risk maturity models in the Southern African region. Southern African region is of interest because that is where Botswana is located.

3.6.1 Risk maturity scorecard for the South African private and public sector

Coetzee and Lubbe (2013) developed a maturity scorecard based on the model developed by RIMS in 2006. They produced what they viewed as a summarised version for ease of use by South African private and public sector organisations. The major criteria used were:

Risk management approach, including:

- the risk culture of the organisation;
- risk management included in the organisation's strategy setting; and
- risk management policy setting (including the risk appetite).

Risk management process, including the identification of risks and the causes of the risks.

- staff experience;
- risk management application and performance measurement to ensure sustainability;
- internal audit; and
- reporting/communication.

This model was developed for all RIMS members globally, but was to be adapted to address South African corporate governance recommendations as specified in the second King Report (IoDSA, 2002). Deliverables for the five maturity levels were developed based on information obtained from various South African risk management guidelines. This renders the model especially inclined for use by the South African market.

3.6.2 Small to medium-sized enterprise (SME) risk management framework

The SME risk management framework developed by Smit (2012), provides SME management with an approach to deal effectively with risks at all organisational levels, thereby facilitating the achievement of organisational objectives through effective risk planning, risk implementation and risk evaluation processes. Organisational, departmental and individual performance measurements were said to be supported by the risk management framework through matching performance measurement indicators with the risk management framework results and evaluating its achievement.

The value-adding capabilities of the SME risk management framework were derived from the underpinning four pillars that supported the framework, namely planning, implementation, results and measurement (Smit, 2012).

Planning entailed evaluating the organisational environment, formulating organisational objectives and strategy, formulating departmental objectives and policies, and establishing risk context and strategy and risk elements (Ibid.).

Executive management, the risk task team or the designated party was found to be responsible for the implementation phase that entailed the execution of the risk management process. The implementation phase consisted of:

- identification of risks that might impede the achievement of objectives;
- evaluation and classification of risks in terms of frequency and effect;
- development and implementation of appropriate risk responses;

- communication; and
- monitoring and review of risk management actions to facilitate continuous improvement.

According to Smit (2012) the results phase is also called the 'risk action consequence', and consists of key performance indicators showing the achievement of departmental and organisational objectives as defined in the planning phase. The SME objectives were outlined as stakeholder satisfaction, reliable business information, business continuity, improved risk profile, safeguarding of assets, efficient operations, competitive advantage, and alignment of risk appetite and strategy (Smit, 2012).

3.7 ERM maturity scales

A risk maturity model is incomplete without a maturity scale that will give a verbal definition of the level of maturity at which an organisation is. The following sections discuss scales that have been previously developed.

3.7.1 Ciorciari and Blattner (2008)

Ciorciari and Blattner (2008:13) developed a maturity-level scale of ERM following the principles defined by the COSO (2004). Their maturity scale ranges from very weak (lowest) to optimised (highest).

The **very weak** level shows that there is hardly any formalisation, documentation or communication of risk management. The **poor** level is defined as informally regulated and with no training or communication in the organisation. The mid-stage risk management level is standardised, defined and documented with basic training conducted. At the **good** level, there is supervision of risk management principles, and risk observance is verified for regular improvement. At the highest level, **optimised**, risk management is integrated into management processes.

The researcher however maintains that the terms 'very weak', 'poor' and 'good' are quite relative and subjective. Besides, using them in the same scale with an addition of 'optimised' may create problems with the users. One would expect such terms as 'very good' or 'excellent' to go with 'good'. It would also be expected that 'very poor' would be the lowest level in the scale. Figure 3.6, adopted from Ciorciari and Blattner (2008:13), shows the maturity scale that was developed. The box below each level shows the description of each level.

	Very weak	Poor	Mid	Good	Optimised
Maturity Level	Very low formalisation, no documentation available, no communication	Informally regulated, defined, still no training and communication	Standardised principles defined and documented, basic training carried out	Supervised, principles are carried out; observance is verified and regularly improved	Optimised, risk management principles and processes are integrated in the management process

Figure 3.6: ERM maturity scale

Source: Adopted from Ciorciari and Blattner (2008:13).

3.7.2 Deloitte risk management capability maturity model scale

Figure 3.7 shows the Deloitte risk management capability maturity model scale (2014) indicating each level and its description.

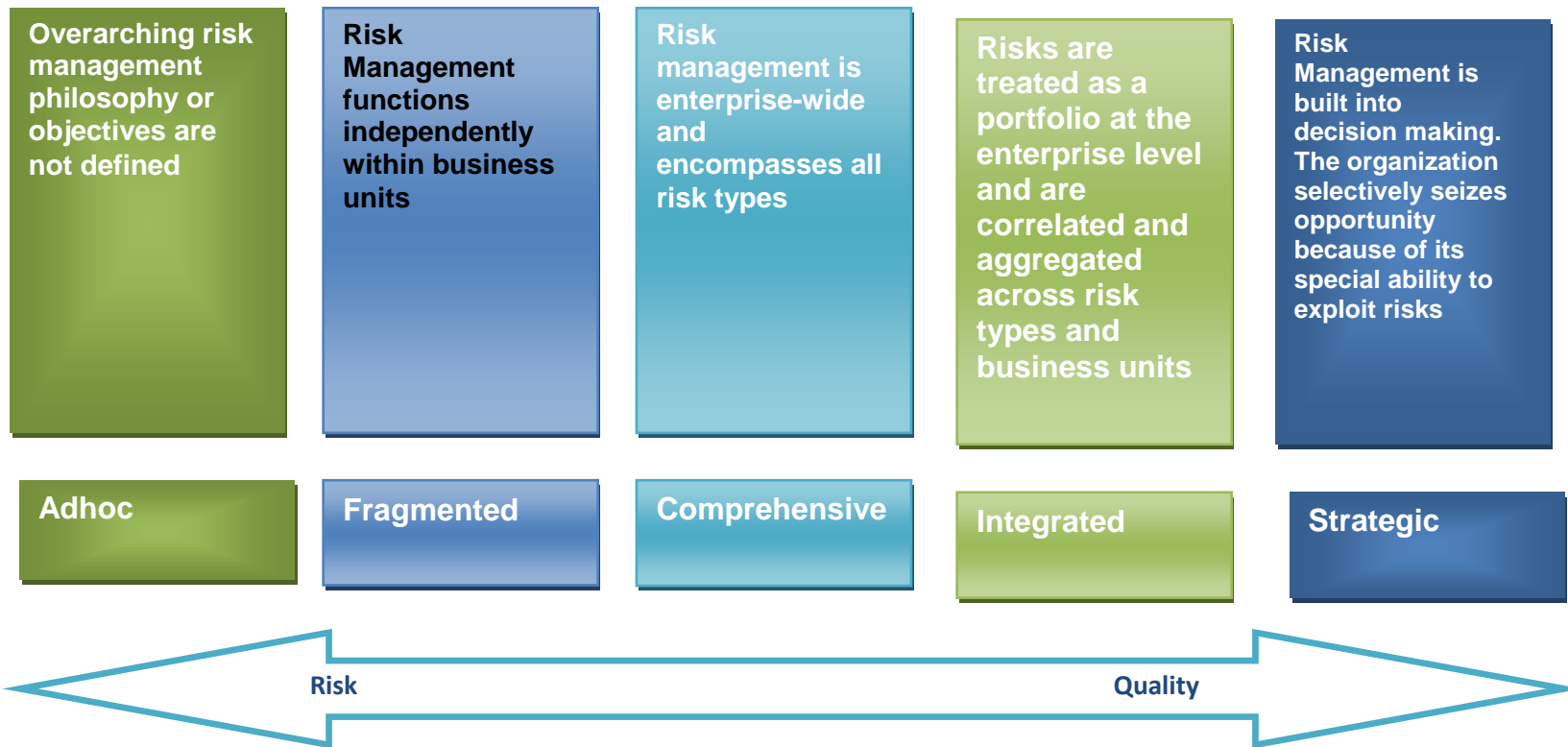


Figure 3.7: Deloitte risk management capability maturity model scale

Source: Deloitte (2014).

3.8 Limitations of existing models

The Hillson (1993) model was specifically made for projects and, although the levels are quite clear, in the researcher's view, some of the aspects do not quite fit in with the organisational set-up. For example, the model is silent about the risk management personnel, or the involvement of management and employees in risk management. The Hopkinson (2000) model similarly does not capture the important aspects as it basically took after the Hillson model.

The capability maturity model is quite detailed too but it would seem to work well for engineering projects. The Deloitte risk management capability maturity model, on the other hand, is very detailed and the measuring scale clear. The ERM framework for Deloitte risk management capability maturity model addresses key indicators, risk register, risk appetite, risk culture, training and capacity, the board's skills and capacity, limits and thresholds, and risk control and self-assessment (see Deloitte, 2014b).

The ERMMF developed in this study (see Figure 3.8) attempts to accommodate organisational situations taking into consideration current ERM expectations. It would inform a company about its strengths and weaknesses by giving descriptions for each component. The model is accompanied by a scale, which was developed to give a description of the maturity levels of the organisation in terms of each component, and of the overall picture. The ERMMF differs from the Deloitte model in that the former uses the COSO ERM framework as a guideline (see Figure 3.8). The COSO framework is deemed by the researcher as sufficiently detailed and user-friendly for organisations.

The Aon model (see AON, 2010) has been observed by the researcher as having detailed levels. In addition, its focus on the insurance industry became relevant to the current study. The study adopted the maturity levels of the Aon model although the research developed its own descriptors for the ERMMF. The descriptors of the Aon model could not be adopted as its levels would then be differentiated by the extent of capabilities, i.e. limited capabilities, sufficient capabilities, consistent capabilities and

well-developed abilities. In the researcher's view, this does not clearly guide the company on how to improve its risk management practices. Figure 3.8 shows the development of the ERMMF by using the COSO model to determine the ERM maturity criteria. It further shows the use of the Aon model to describe maturity levels. An interpretation scale was added to give an interpretation of each maturity level to guide the users of ERMMF.

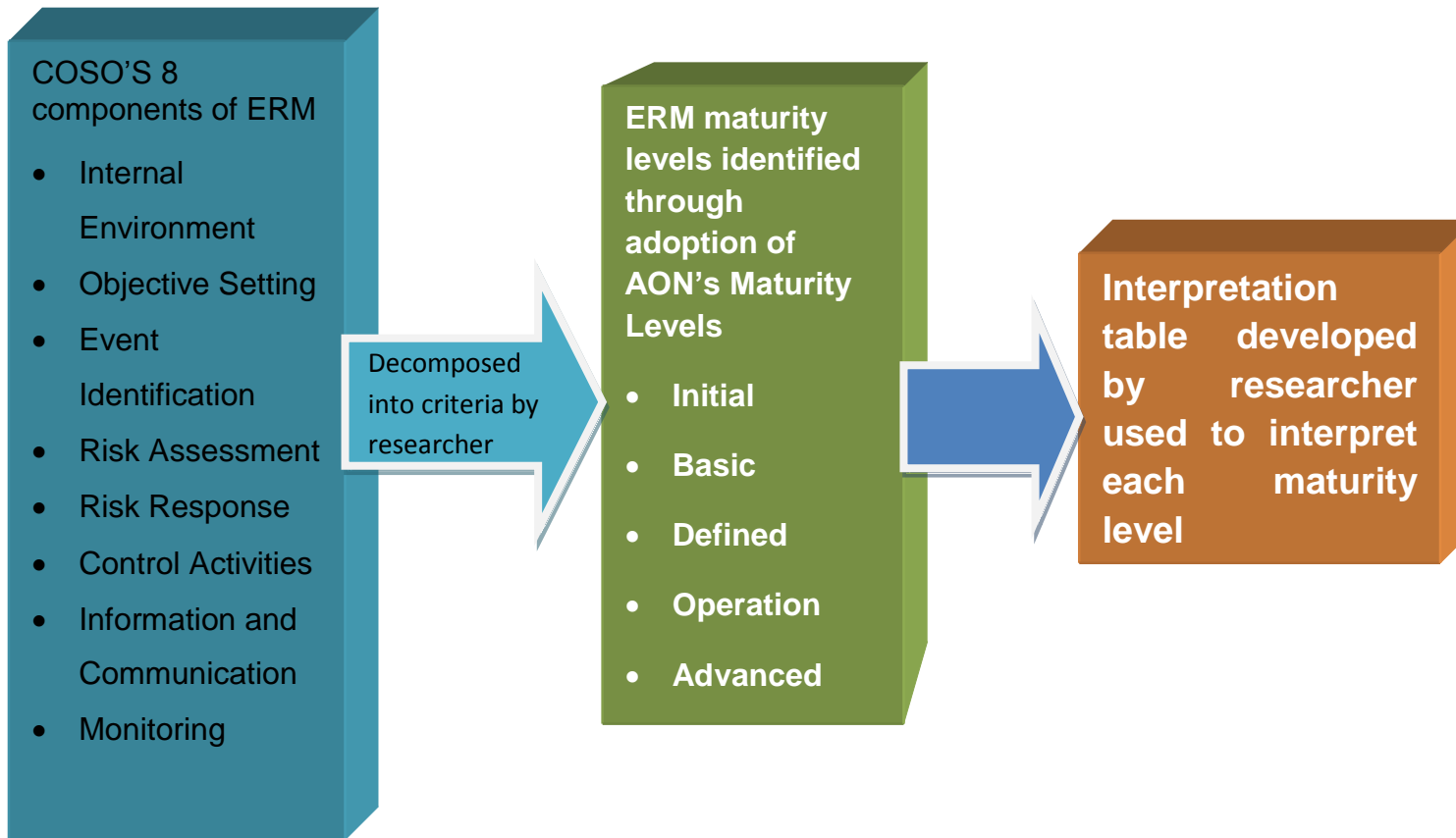


Figure 3.8: The development of the ERMMF

Source: Researcher's own compilation

3.9 Conclusion

This chapter examined literature on ERM by defining ERM and clearly differentiating between traditional risk management and ERM. One major difference was found to be that traditional risk management looks at risks in silos (see 3.1.2). This means that each department considers only the risks facing it. ERM insists on the holistic view of risk as an organisation. In this case, risks are seen to be interrelated. The need for all stakeholder involvement in ERM is one of the differentiating factors as traditional risk management is seen as a bottom-up approach facilitated by the personnel in charge of risk management.

The benefits of having ERM as an organisation were briefly highlighted (see 3.1.3). The chapter also considered issues and events that have made implementation of ERM in every organisation almost compulsory.

There are a number of risk management standards developed from different parts of the world. These were briefly discussed in 3.2. These included the COSO ERM framework, which was mainly utilised in this study.

Some risk standards were then compared and contrasted. It was noted that most of the standards carried a number of similarities in their emphasis on strategic areas. The COSO standard was the one chosen for this study as it was found to be detailed in the ERMIP and was designed for any organisation that requires implementing or improving its risk management process.

Risk maturity models were discussed and evaluated in detail in the chapter. The next chapter discusses the insurance perspective of risk management as the study was located within the confines of the insurance industry.

CHAPTER FOUR

INSURANCE PERSPECTIVE OF RISK MANAGEMENT

4.1 Introduction

While Chapter two delved into risk management literature that supported the research objectives, Chapter three concentrated on ERM. Chapter four examines literature on risk management in the insurance industry in general, and in Botswana in particular. This is in support of the study, which was based on the insurance industry in Botswana. Risks that are faced by the insurance industry are discussed in this chapter. The risks range from financial risks to physical risks. Most of the risks however were discussed in Chapter two as they are general to all organisations. Suggestions are made in the present chapter on how to manage the outlined risks.

The insurance industry is contextually defined looking at the players in the industry. The terms 'insurer', 'reinsurer' and 'intermediary', among others, are explained. The chapter also details the number of players in each defined stratum in the insurance industry. Chapter four further discusses the economic and regulatory environment of the Botswana insurance industry by examining Botswana's economic outlook and exploring the role of the regulator and the Insurance Industry Act (No. 1 of 2016). A number of other instruments that are used to regulate the insurance industry are cited.

Finally, the empirical studies related to the current study are analysed. This chapter reports on several studies that have been conducted in the field of ERM in general.

4.2 Role of the insurance industry in the economy

The United Nations Environment Programme Finance Initiative (UNEP FI, 2009), confirmed the enormous size of the insurance industry worldwide, providing statistics which indicated that the worldwide premium income reached \$4.2 trillion in 2008 (UNEP

FI, 2009:10). The insurers' global assets under management were at \$19.8 trillion in 2007 and the value of the risks insured by insurance companies for individuals was estimated to be around \$400 trillion (UNEP FI, 2009:11). The insurance industry was seen by the same organisation as integral to the efficient functioning of markets, economies and societies.

The European Systemic Risk Board (ESRB) (2015) states that the insurance sector upgrades welfare entirely through reduced uncertainty of consumption and investment. At an overall, macro-economic echelon, a well-functioning insurance industry is expected to play a part in the allocation of risks domestically and globally (ESRB, 2015:2). In addition, the availability of insurance may enhance efficiency elsewhere in the economy, an effect which may feedback more or less strongly into demand for certain kinds of insurance, and may also contribute to the level of economic activity and growth (European Systemic Risk Board [ESRB], 2015:2). The last two points imply that the insurance industry can be a very important source and channel of long-term financing of investment, and can even contribute to financial market efficiency.

The ways in which insurance contributes to society and economic growth were summarised by the Geneva International Association (2012:4) as follows:

- it allows different risks to be managed efficiently;
- it encourages loss mitigation;
- it enhances peace of mind and promotes financial stability;
- it helps relieve the burden on governments for providing all services of social protection to citizens via social security systems;
- it facilitates trade and commerce, supporting businesses and economic growth;
- it mobilises domestic savings; and,
- it fosters an efficient allocation of capital, advancing the development of financial services.

The roles cited above make it worthwhile to discuss issues pertaining to risks that face the insurance industry; hence, this study which assessed the enterprise risk maturity levels of the insurance industry in Botswana.

4.3 Insurance core principles

The International Association of Insurance Supervisors (IAIS) (2015), a member of the FSB, developed the core insurance principles (ICPs), which provide an internationally putative framework for the insurance industry supervision purposes. These ICPs pursue to cultivate a general global conjunction in supervisory practices and principles and serve as a supervisory benchmark for insurance supervisors in different jurisdictions (IAIS, 2015).

IAIS (2015) asserts that the ICPs are principles (statements), standards and guidance applicable to supervisors of the insurance industry for effective regulatory measures and these are discussed as follows. The ICP **statements** have been considered of uppermost height as they recommend the fundamental rudiments that must be present in the supervisory system to foster a financially unassailable insurance industry and provide an adequate level of policyholder protection. **Standards** are considered next after the statements, and are connected to precise ICP statements. They are a prescription to how the statements should be implemented. Last in the hierarchy is **guidance material** which characteristically supports the ICP statements and standards. Guidance material provides typically simplified material to help users understand the statements and standards (IAIS, 2015).

According to IAIS (2015) the ICPs outline objectives, powers and responsibilities of the supervisor who must be operationally independent, accountable and transparent, among other expectations. They further authorise the supervisor to exchange information with other relevant supervisors and authorities, provided all observe confidentiality (IAIS, 2015). IAIS (2015) further states that ICPs demand that a lawful organisation that might want to embark on insurance activities in a jurisdiction, must be

licensed. ICPs additionally require that key position holders in insurance organisations should be suitably qualified to occupy the positions in which they have been appointed.

Supervisors are further required to approve any insurance organisation acquisition that may result in exercise of control by the acquirer. Another requirement is for insurers to institute and execute a corporate governance framework and effective systems of risk management to protect the interests of policyholders (IAIS, 2015). ICPs recommend that risk management must be an ongoing process, which should be monitored with corrective measures taken where the risk management objectives are missed. ICPs, in addition, explicate a series of exit routes for legal insurance organisations, thereby defining insolvency. They also elucidate on issues of risk transfer, which include reinsurance (Ibid.). The supervisor is sanctioned to establish requirements for the evaluation of assets and liabilities and capital adequacy for solvency and risk monitoring purposes. The supervisor regulates the conduct of all players in the insurance and requires insurers to divulge pertinent, inclusive and suitable information at the right time to stakeholders. Furthermore, it is a requirement that the insurance industry take effective measures to prevent, identify, report and alleviate fraud, money laundering and financing of terrorism in insurance (IAIS, 2015).

The Non-Banking Financial Institution Regulatory Authority (NBFIRA) through use of regulatory instruments that include the Insurance Act (No. 1 of 2016) addresses several of the requirements highlighted by the CIPs. This has brought rationality in the sector so that its activities are aligned to ERM expectations (NBFIRA, 2015). The regulator further monitors licensing and auditing activities of the whole insurance industry, to mention but a few.

4.4 Insurance industry and risk management

According to the International Association of Insurance Supervisors (IAIS) (2006), risk is the *raison d'être* (reason for existence of) for insurance. It is through insurance contracts that customers seek to transfer various financial uncertainties to the insurer in

exchange for payment of a set of premiums charged by the insurer. There are essentially two types of insurance contracts: life insurance and non-life insurance (Gupta, 2007:27; Sahoo & Das, 2008:32). **Life insurance** contracts provide protection in the event of death, longevity, disability, critical illness, or health care costs (Sahoo & Das, 2008:33). Contracts for **non-life insurance** afford protection against costs or losses to property, among others, owing to contingencies such as fire, theft, accident and storms (Gupta, 2007:27). The estimation of the amount and timing of policyholder payments and the present value of claim payments (taking account future costs to administer these obligations) are subject to risk. It is fundamental that insurers manage the risks inherent in the insurance contracts they assume.

Over the last three decades, the international insurance fora have intensified efforts to strengthen insurance activities together with their supervision (IAIS, 2006). This has resulted in the rise of the value of internal control practices that are part of ERM. Furthermore, reporting conditions are an imperative part of the Solvency II legal framework (see Solvency II, 2007), which require players in the insurance industry to submit to their supervisory authorities information which is necessary for the purposes of regular supervision (European Insurance and Occupational Pensions Authority [EIOPA], 2015:3). The International Association of Insurance Supervisors (IAIS), which was established in 1994, is a voluntary association of insurance supervisors and regulators from over from almost 140 countries (IAIS, 2015:1). As a member of the FSB, their aim is to encourage effectual and internationally dependable supervision of the insurance industry with the intention to advance and uphold rational, innocuous and constant insurance markets for the advantage and security of policyholders and to add to worldwide economic stability (IAIS, 2015:2). This association therefore supports supervision of the insurance industry to ensure that their risk management processes are adequate.

Not only is insurance important to the insurance organisations, but is also important to all the insurer's stakeholders (policyholders, investors and supervisors), as well as overall system stability (IAIS, 2015:4). Insurers have long managed their underwriting

risks, and the science of managing all their risks of operation (i.e. ERM) is rapidly evolving (Ibid.). It is necessary also to state at this point that while insurers find substantial significance in the development of quantitative approaches to risk management, the benefits of qualitative approaches for some types of risk should not be underestimated (IAIS, 2011:3).

The insurer ought to ascertain well-defined responsibilities for the numerous aspects of risk management, differentiating between those in line management roles and those in risk management roles. The IAA (2016) maintains that, for many insurers, implementation of ERM is not expected to be straightforward or short-term in nature. However, if implemented, ERM should bring fundamental changes to governance and management structures. The IAIS (2006) further claims that many of the insurers who have developed progressive procedures describe ERM as an expedition implemented in upsurges. This then calls for insurance organisations to take a cautious approach in the implementation of ERM. Figure 4.1 shows the expected growth of the insurance industry in general in ERM. The researcher has based the expected position of the insurance industry in Botswana on the Standard and Poor's (2007) predictions.

Evolution of Enterprise Risk Management

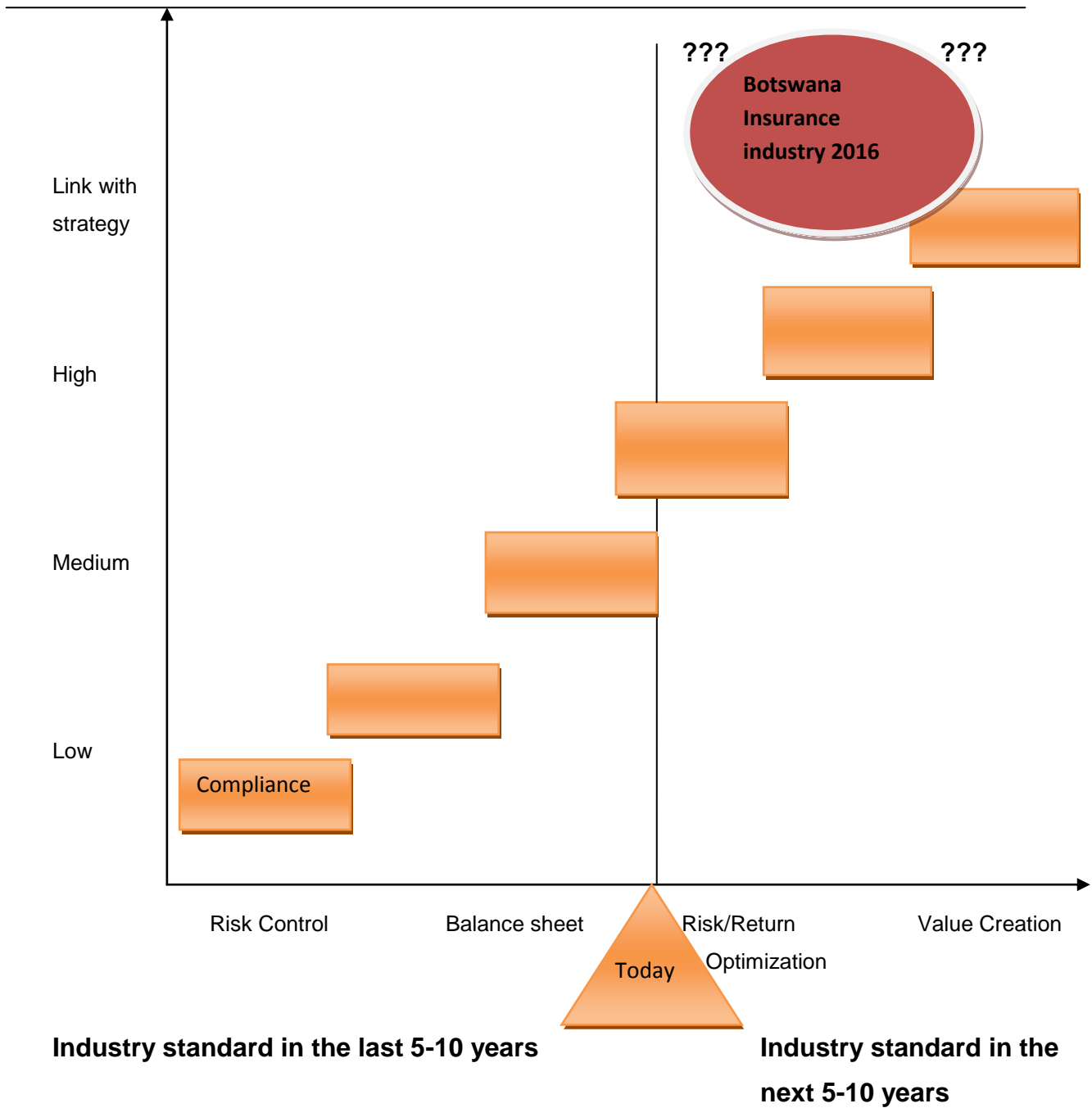


Figure 4.1: Evolution of ERM

Source: Adopted from Standard and Poor's (2007).

According to the Standard and Poor's (S&P) (2007) predictions, it could be expected that by 2017 at the latest, the insurance industry would be fully-fledged in ERM practices. Section 4.5 takes a close look at the insurance industry, especially contextualising the sector to the area of study, ERM.

4.5 Contextual definition of the insurance industry

The insurance industry has a number of players, although the current study focused on the major players dealing with insurance. The agents were not included in the study as they were regarded as simply an extension of the insurers.

4.5.1 Insurers

The Insurance Act of Botswana (No. 1 of 2016) defines an insurer as a person who undertakes liabilities by way of insurance (namely, short-term insurance, life insurance and reinsurance), whether or not as a member of an association of underwriters. According to NBFIRA (2015), there are 12 short-term insurers (non-life insurers) and 9 life insurers (long-term insurers) in Botswana. Short-term insurers offer short contracts, while life assurance companies offer policies that can cover a lifetime (NBFIRA, 2015).

The short-term insurance industry competitive but is composed mainly of property insurance and motor vehicle insurance, with gross written premiums of 40% and 32% respectively. Botswana Insurance Company Limited (BIC), Regent Insurance (Botswana) (Pty) Limited (Regent) and Hollard Insurance Company of Botswana Limited are reported to be the top leaders in short-term insurance in Botswana (NBFIRA, 2015).

4.5.2 Re-insurers

Re-insurers save to insure the insurer in the event that they cannot contain the risk passed on to them by the insured. Figure 4.2 shows the three reinsurance companies in Botswana as of 2015, according to the NBFIRA 2015 report.

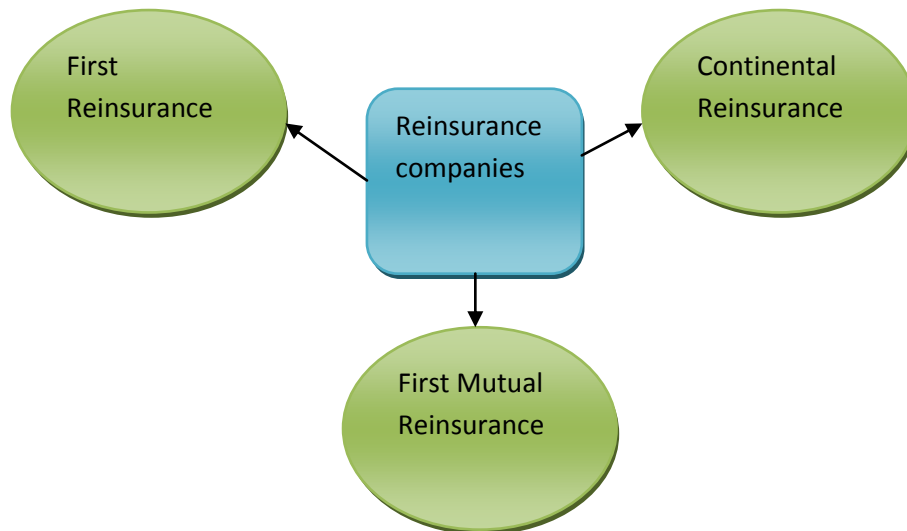


Figure 4.2: Reinsurance companies in Botswana (2015)

Source: Researcher's own compilation

4.5.3 The intermediaries

These play a middleman role between the insurer and the insured and can be divided into brokers and agents (Insurance Act of Botswana, No. 1 of 2016). In this case, brokers were part of the population of study. In 2015, NBFIRA confirmed that there were 45 brokers in Botswana.

4.5.4 The buyers

Buyers are insurance clients, and they have their own risk management expectations. These can be individual buyers or corporate buyers. In deciding on the insurance company's risk appetite, the interests of the buyers (policyholders) must be accommodated (Gupta, 2007:22). Buyers were not part of the population of the study.

4.5.5 Other players

Other players include the Insurance Institute of Botswana, which was re-launched in June 2016, and the Botswana Short-term Insurance Underwriters Association (BSTIUA). These provide forums for discussion of regulatory and other issues that

affect the insurance industry (Insurance Act, No. 1 of 2016). Being a member of these organisations would be beneficial to a player in the insurance industry as it enables them to access relevant information.

4.6 Risks faced by the insurance industry

Intensified globalisation, complexity and competitiveness in the insurer and re-insurer market intensify insurer exposure to several risks (IAIS, 2011:96). Some risks are inherent in their core business, while others are general business risks that could affect any other organisation. In the rapidly developing field of risk management, there is no single globally accepted manner of naming and categorising insurer risks. However, there is growing convergence in defining the key broad categories of insurer risk as underwriting, credit, market, operational, liquidity, insurance and strategic (IAIS, 2011).

The first three types (underwriting, credit and market risk) are recognised overtly in the computation of capital adequacy and solvency requirements in various states (IRA, 2013). The last three categories (liquidity, insurance and strategic risk) are important insurer risks for which other forms of supervisory assessment (other than capital requirements) may be more apposite (Gupta, 2007:49). Insurance supervisors have identified operational risk (loss due to the failure of people, processes or systems) as an important cause underlying insurer failure (IAIS, 2006).

Underwriting risks are frequently referred to as 'insurance' or 'technical risks' (Gupta, 2007:49). They consist of such perils as mortality, longevity, morbidity, fire and weather underwritten by the insurer (Ibid.).

Credit risk results from the possibility that a counterparty, such as a bond issuer, mortgage borrower or re-insurer, will fail to make payments when they are due (Dun & Bradstreet, 2007:16).

Market risks result from the insurer's exposure to financial variables, such as equity prices, investment yields, and asset–liability management risk (Dun & Bradstreet, 2007:17).

Frequently, **liquidity** risks are considered part of a broader definition of market risks (Bhattacharya, 2010:4). The combination of credit and market risks is sometimes referred to as 'investment' or 'asset' risks (Hull, 2012:37). The following paragraphs discuss the risks in detail.

4.6.1 Credit (counterparty) risk

This is the risk that counterparties in loan and derivatives transactions will default, that is, they will fail to meet their obligations in accordance with agreed terms (Bhattacharya, 2010:4). This can take the form of pre-settlement risk, in which case the counterparty would have become bankrupt prior to settlement (Hull, 2012:37). It could also emanate from settlement risk, which arises from the probability that one party will perform its obligation while the other does not (Dun & Bradstreet, 2007:13). Credit risks are a vital component of fixed-income investing, which is why rating agencies such as Standard and Poor's (S&P) evaluate credit risks of thousands of corporate issuers and municipalities on an ongoing basis (Vijayaragavan, 2013:148).

As part of the ERM exercise, credit risk calls for the insurance industry's awareness of the need to identify, measure, monitor and control credit risks as well as to determine that they hold adequate capital against these risks (Bhattacharya, 2010:4; Hull, 2012:37). There is a need for organisations to adopt sound practices in establishing an appropriate credit risk environment, operating under a sound credit-granting process, maintaining an appropriate credit administration, measurement and monitoring process, and ensuring adequate controls over credit risk (Bhattacharya, 2010:9).

4.6.2 Market risk

Market risk comprises the risk relating to the possibility that instruments in the organisation's trading book will decline in value (Hull, 2012:37). In other words, it is the

risk of losses due to movements in financial market variables such as interest rates, foreign exchange rates and security prices (Dun & Bradstreet, 2007:15). Insurance organisations are subject to market risk in both the management of their balance sheet and in their trading operations (Vyas & Singh, 2010:16). The market risk factors are as follows:

4.6.2.1 Liquidity risk

Liquidity risk of insurance companies arises from funding of long-term assets by short-term liabilities, thereby making the liabilities subject to roll or refinancing risk (Hull, 2012:38). There is a need for the organisation to be able to meet its liquidity needs, as and when they emerge without incurring undue costs (Bhattacharya, 2010:6). An organisation that manages its liquidity effectively raises sufficient funds by increasing the covering assets promptly at a reasonable cost. Well-managed liquidity risk results in increased confidence levels in the market (Bhattacharya, 2010:10). Regular monitoring of the organisation's liquidity ratios is therefore necessary to keep this type of risk in check.

4.6.2.2 Interest rate risk

This refers to the risk where there is an unexpected change in the market interest rate on the NII (Bhattacharya, 2010:11). The NII can be exposed by changes and/or mismatches in the cash flows or repricing dates. This can be divided into four sub-risks: basis risk (see Vyas & Singh, 2010), yield curve risk (see Vijayaragavan, 2013), repricing risk and option risk (see Bhattacharya, 2010).

4.6.2.3 Foreign exchange risk

Foreign exchange (forex) risk, also known as 'currency risk' or 'exchange rate risk' (see Vijayaragavan, 2013) is the risk of loss generated by changes in the exchange rate during the exchange between domestic and foreign currencies. It is the risk that an organisation may suffer losses as a result of adverse exchange rate movements during the period in which the organisation has an open position, either spot or forward, or a combination of both, in an individual foreign currency (Bhattacharya, 2010:11). The

forex transaction with counterparties from another country also triggers sovereign or country risk (Bhattacharya, 2010:12). Insurance companies in Botswana that conduct businesses even beyond borders are not excluded from this kind of risk.

4.6.2.4 Equity risk

Equity risk, also known as commodity risk (see (Bhattacharya, 2010) is the risk that stock prices will change. It is the risk of losses arising from negative changes in the fair value of that portion of the long-term equity investments portfolio (Vyas & Singh, 2010:16). This risk is bound to affect insurance organisations as they invest a proportion of premiums received.

4.6.3 Operational risk

Operational risk was defined by the BCBS in 2001 as the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events (Vijayaragavan, 2013:150). Put differently, it is the risk arising from the execution of a company's business functions (Vyas & Singh, 2010:17). Lloyd's (2006) suggest that some of the causes of operational risk are:

- a lack of policies and procedures;
- inadequate segregation of duties;
- inadequate activity management;
- a lack of management review;
- information processing errors;
- inadequate physical controls; and
- external events, such as power cuts and water rationing.

Operational risks were categorised by the BCBS as follows:

4.6.3.1 Internal fraud

These are acts intended to defraud, misappropriate property, or circumvent regulations, the law or company policy (HKIB, 2011). Examples of internal fraud include unreported

transactions, unauthorised transactions, theft and fraud, tax non-compliance and insider trading (Ibid.). In an insurance company, this could result from dishonest underwriters, accountants and senior management as a whole, and the consequences of this are profound. The organisation could face tough disciplinary measures from the law.

4.6.3.2 External fraud

These are acts by third parties to defraud, misappropriate property, or circumvent the law (HKIB, 2011). External fraud consists of theft, robbery, forgery and hacking of information (Ibid.). Insurance companies must be diligent in their selection of clients and organisations with whom to invest to avoid this kind of risk.

4.6.3.3 Employment practices and workplace safety

This category consists of acts consistent with employment, health or safety laws or agreements, or which result in payment of personal injury claims, or claims relating to diversity or discrimination issues (Cruz, Peters & Shevchenko, 2015:3). Organisations must stay up to date with regulatory requirements and changes to avoid falling short in any of the requirements.

4.6.3.4 Clients, products, and business practices

This refers to unintentional or negligent failure to meet a professional obligation to clients and the use of inappropriate products or business practices (Van, 2009:23). Such issues as fiduciary breaches, disclosure violations and misuse of confidential information fall under this category. In this case, if an organisation is not diligent, it could lose substantial amounts of money due to failure to comply.

4.6.3.5 Damage to physical assets

The category includes loss or damage to physical assets as a result of natural disasters or other events, such as terrorism or vandalism (Cruz, Peters & Shevchenko, 2015:3). The insurance organisations, although not capital-intensive, do own assets, and these are the ones subject to damages due to unforeseen events.

4.6.3.6 Business disruption and systems failure

Business disruption and systems failure could include software, hardware or telecommunications failure, or utility disruption (Van, 2009:23). Any of these would affect the operations of the business so that pre-set objectives are not met.

4.6.3.7 Execution, delivery and process management

These are failed transaction processing or process management, and include disputes with trade counterparties and vendors resulting in data entry or loading error, missed deadlines or responsibility, failed reporting obligation or incorrect records (Van, 2009:24). This is common with insurance organisations as they may disagree with clients in terms of claims settlement amounts and dates.

4.6.4 Insurance risk

This refers to the kind of risk to which the insurer is subjected if it has insufficient or unsuitable underwriting, reserving, claims management, reinsurance, product pricing and design, which ultimately will cause business loss and failure to meet obligations (IRA, 2013:5).

The risks discussed above need to be carefully managed for insurance organisations to meet their strategic objectives and to satisfy the needs of their stakeholders. The sections that follow thus discuss suggested ways of managing some of the risks.

4.7 Risk management for insurance industry

From the literature reviewed in the previous chapters, it was established that, for an organisation that has implemented ERM, the general risk management framework begins with the board of directors and senior management of the insurer setting appropriate corporate governance policies and practices. This ensures that the proper processes and controls are in place to measure and manage risk. Next, the board and senior management establish the objectives for the risk management process by setting the overall risk tolerances and the risk appetite for the insurer (IRA, 2013). A board that does not understand the organisational strategy may not appreciate the risks, and if it

does not appreciate the risks, it will probably not ask the right questions to ensure that the strategy is properly executed (IRA, 2013).

4.7.1 Management of credit risk

With the increased government and corporate regulations designed to fight money laundering and terrorist funding, financial institutions and other organisations are required to know their clients. Consequently, this contributes to better credit management (Vyas & Singh, 2010:22). Credit risk management, at the fundamental level, involves two critical components: credit decision and credit monitoring (Ibid.).

Credit risk has to be assessed and managed at individual exposure level as well as at portfolio level (Dun & Bradstreet, 2007:64). Lloyd's (2006) suggests that, in order to understand the operational risks arising from credit risks, there is a need to consider the key processes that relate to each counterparty. Identifying the key controls specifically designed to mitigate credit risk in each area would assist mitigate credit risks.

An insurance organisation would do well to have an established credit risk committee, with clear terms of reference, which reviews and updates the credit ratings of re-insurers, brokers and cover-holders on a regular basis (Dun and Bradstreet, 2007:64). Controls to ensure that only approved re-insurers and brokers are used, and policies regarding the maximum exposure to any one re-insurer must be in place. Regular reports on debtors must be generated. Most insurance organisations in Botswana are generally small (NBFIRA, 2015) and may not be able to afford to have some committees and positions desired. They are expected at least to put something in place to guard against credit risk.

4.7.2 Management of market risk

The market risk management department typically has three groups: policies and procedures, risk measurement and risk management (Dun & Bradstreet, 2007:77). The **policies and procedures** group establishes and maintains a framework of policies to ensure that the trading operation is controlled (Bhattacharya, 2010:22). The **risk**

measurement group produces periodic, timely and precise risk reports that are to be used by the risk management group, senior managers and traders (Ibid.).

The **risk management** group has to see that the risk taken by the traders and reflected in the risk reports is in line with the overall risk policies of the organisation (Bhattacharya, 2010:22–23; Dun & Bradstreet, 2007:78). Lloyd's (2006) suggests that market risk can be managed through performance benchmarks, annual review of benchmarks, and revision in the light of changes to business strategy. Regular reporting on the investment portfolio and monitoring of the portfolio against the limits established in the investment mandate would also assist. Insurance organisations would do well to find an investment specialist to monitor the market movements in order to manage the market risk adequately.

4.7.3 Management of operational risk

Operational risk regulatory capital is needed to counter operational risk (Dun & Bradstreet, 2007:88). To determine this capital using different suggested methods, the BCBS (2010) lists conditions that an organisation must satisfy:

The organisation must have an operational risk management function that is responsible for identifying, assessing, monitoring and controlling operational risk. It must keep track of relevant losses by the business line and must create incentives for the improvement of operational risk.

There must be regular reporting of operational risk losses throughout the organisation. The operational risk management system must be well documented, and the operational risk management processes and assessment system must be subject to regular independent reviews by internal auditors.

The operational risk system must also be subject to regular review by external auditors or supervisors or both (Dun & Bradstreet, 2007:88).

These measures, although they were prescribed for the banking sector, are highly applicable to the insurance industry as well.

4.7.4 Management of liquidity risk

Liquidity risk can be managed through having financial controls that involve regular and formal forecasting of cash flow, while reflecting the likely effects of catastrophic events (IIA, 2004). Liquidity risk may also be managed through monitoring actual levels of liquid assets against a particular benchmark and through the maintenance of adequate liquid assets to meet expected changes in regulators' financial requirements (Hoyt & Liebenberg, 2011). If the assets are not available, there must be at least a contingency plan to raise sufficient funds when required (IRA, 2013). An enterprise could have formal agreements in place for borrowing facilities and credit control policies and procedures to target outstanding premiums and reinsurance recoveries for collection as part of the contingent measure (Lloyd's, 2006). With current advanced developments in technology, an insurance organisation would not be expected to encounter challenges to monitor its liquidity levels as real-time information is expected to be available to almost every key position holder.

4.7.5 Management of insurance risk

Insurance risk may be addressed through a number of key processes, such as underwriting, claims and reserving (IRA, 2013:10). **Underwriting** risks can be controlled through having signed and regularly reviewed underwriting authorities for all underwriting personnel, having underwriting peer review and regular review of risks written (Gupta, 2007:50). Risks associated with **claims** can be controlled through using signed claims authorities and exception reporting procedures setting out the approach to claims management, including service standards, complaints handling and the use of third-party experts (IRA, 2013:10). Periodic actuarial reserve estimation and reporting can be used to control risks associated with **reserving** (Lloyd's, 2006).

4.8 Audit and compliance roles in risk management

Audit and compliance are two crucial roles in any organisation. Compliance implies meeting the statutory expectations imposed by various regulators for the orderly functioning of any market (Dun & Bradstreet, 2007:76). It has now become a requirement for banks and financial services entities in most jurisdictions to appoint a chief compliance officer (CCO) who ensures that compliance with regulations gets senior-level attention (Dun & Bradstreet, 2007:76-77). The Botswana insurance market is relatively small, and most of the organisations cannot afford to have some of the recommended positions. However, such organisations could have a risk management officer or an internal auditor to take care of issues of compliance.

4.9 Challenges faced by the insurance industry in implementing ERM

While ERM offers noticeable benefits, its implementation is not without challenges (Choi, Mao & Upadhyay, 2013:4). Choi et al. (2013) highlight challenges in ERM implementation as due to the need for cultural changes as well as improved overall skills in managing risks and trust in the overall quality of economic capital models. Some of the specific challenges are discussed below.

4.9.1 Different ERM definitions

Lack of clarity regarding what ERM entails makes implementation more difficult for insurance organisations. Choi et al. (2013), however, note that some insurance companies see ERM as “the proactive execution of a senior management sponsored, entity-wide strategic process of assessing and responding to the collective risks that impact an organization’s ability to maximize stakeholder value” while others see it as “a structured and embedded approach that supports the alignment of strategy, processes, people, technology, and knowledge with the purpose of evaluating and managing the uncertainties an organisation faces as it creates value” (Choi et al., 2013:4–5).

The above observation would imply that for as long as there is no clear understanding of what ERM is, it will not be easy to implement it. Some companies may fear to implement it while others may implement it but not do it properly. Not implementing it properly leads to wasted resources and does not improve the organisation's risk exposure.

4.9.2 Complex environment

Kerstin, Simone and Nicole (2014:10) conclude that the main reason for a complex environment is that the world faces volatility, uncertainty, complexity and ambiguity. **Volatility** refers to the nature and dynamics of change, while **uncertainty** results in lack of predictability of issues and events (Horney, Pasmore & O'Shea, 2010:35). The global environment presents changes in an unpredictable way (Ibid.). Changes in political position and changes in stakeholder expectations are examples. **Complexity** comes as a result of issues and circumstances that may surround the organisation. With many changes happening and unprecedented events occurring, insurance companies may be faced with new businesses to insure (Kerstin et al., 2014). **Ambiguity** is the haziness of reality and the mixed meaning of conditions (Horney, Pasmore & O'Shea, 2010:35). In the case of the insurance industry, some risks may be difficult to classify as they may fall in more than one category.

It would therefore appear that the complex environment makes it difficult for organisations to conduct risk planning thereby integrating their risk appetite into the organisational objectives.

4.9.3 Challenges with the risk process

It is important to uncover all risks in an organisation because undetected risks can have a detrimental effect on an organisation. However, a number of problems occur when identifying risks because risk identification has to be done by the risk management team of the organisation, which has to collect information systematically on all risks and types of risks (BaxterBruce, 2013:2; Kerstin et al., 2014:10). Collection of data necessary to model relationships among various risk sources has been identified as the biggest

barrier for insurance companies (Choi, 2013:5). While there are different techniques available to assess risk, the challenge is to determine an appropriate technique or combination of techniques to assess risks effectively. After risks have been assessed, it is often a challenge to quantify them. This poses a challenge while implementing ERM in an organisation (Kerstin et al., 2014:11).

ERM recommends that all risks be identified and the relationships between risks determined (Kerstin et al., 2014:10). Since organisations find this a nightmare, probably due to a lack of appropriate expertise to do so, it becomes difficult for them to implement ERM as the risk identification precedes the rest of the stages of the risk management process.

4.9.4 Need for commitment

ERM has been cited as requiring considerable commitment of resources and is has also been found to be time-consuming (see Louisot & Ketcham, 2014). Often ERM has to be integrated with the way the business operates at the time of the decision to implement ERM (Moeller, 2011:5). This may call for the need for people to change the way they work inspired by strong commitment from senior leadership (BaxterBruce, 2013:2). Where there is resistance to this change, the organisation may not succeed in implementing ERM. In addition, if management will not commit funds toward ERM implementation, it may be a failure (Louisot & Ketcham, 2014:7).

The challenges highlighted in the preceding paragraphs show that, while insurance companies are said to have implemented ERM, it might not be functioning at the expected levels. It is for this reason that the current study came up with the ERMIP. (Louisot & Ketcham, 2014:7). This requires total acceptance and agreement of the top management and the board of directors as risk management would have to appear in the policies and procedures (Moeller, 2011:5).

4.10 A perspective of the insurance industry in Botswana

The following paragraphs examine insurance specifically in Botswana.

4.10.1 Botswana economic overview

Botswana is said to have had one of the world's fastest growing economies over the past four decades (Coleman, 2013: 57-58). Diamond-led growth combined with sound macro-economic policies and good governance were avenues that transformed Botswana from one of the poorest countries in the world to one in the middle-income range (IC Publications Inc., 2011). Despite the remarkable achievements, the country still has considerable social challenges such as HIV/AIDS, poverty in some areas, unemployment, and income inequality, which are too high for a middle-income country.

The economy continues to rely heavily on diamond mining, although diamond production is expected to decline after 2020 (Coleman, 2013: 57-58; IC Publications Inc., 2011).

4.10.2 Insurance industry in Botswana

The insurance wing of NBFIRA is responsible for the regulation and supervision of re-insurers, insurers, medical aid funds and insurance intermediaries and the Insurance Industry Act (No. 1 2015)). The NBFIRA 2015 report gives the details that are discussed in the next paragraph.

The NBFIRA was established as an independent regulatory agency for non-bank financial institutions in April 2008. As outlined in section 8 of the NBFIRA Act (No. 3 of 2016), the principal objective of NBFIRA is to regulate and supervise insurance organisations, among other non-bank financial institutions so as to foster their safety and soundness, highest standards of conduct of business, fairness, efficiency and orderliness. NBFIRA is also mandated to ensure the stability of the financial system, and reduction and deterrence of financial crime (NBFIRA, 2015).

The legislative framework governing the operations of both NBFIRA and supervised institutions is known as the financial services law and includes the following Acts of Parliament:

- the Non-Bank Financial Institutions Regulatory Authority (NBFIRA) Act (No. 3 of 2016);
- the Insurance Industry Act (No. 1 of 2016);
- the International Insurance Act (No. 7 of 2005);
- the Pension and Provident Funds Act (No. 17 of 1965);
- the Botswana Stock Exchange Act (No. 11 of 1994);
- the Collective Investment Undertaking Act (No. 19 of 1999); and
- Part XVI of the Income Tax Act (No. 1 of 1995).

All these are used in the regulation of the insurance industry, among others. The NBFIRA Act is the main component of financial services law in the sense that it is an umbrella statute that is intended to work with the other statutes that make up the financial services law (NBFIRA, 2015). The Act also provides a comprehensive licensing regime for supervised entities, and provides NBFIRA with the powers to remedy the following:

- imprudent practices;
- unethical practices and contraventions of the law through the issuance of notices;
- the issuance of orders;
- the issuance of directives;
- the acceptance of undertakings;
- the imposition of civil penalties; and
- the application to the courts in the most serious cases involving offences(NBFIRA, 2015).

NBFIRA also has significant powers with respect to information gathering, the conduct of on-site inspections and the conduct of investigations (NBFIRA, 2015).

The Insurance Act (No. 1 of 2016) provides for all the detailed processes and duties relating to the insurance industry. It also aims to provide for the licensing provisions of insurers, insurance brokers and insurance agents.

The preceding paragraphs serve to demonstrate that the Botswana insurance industry is regulated and therefore expected to carry out its processes in an expected manner.

4.11 ERM and the insurance industry

EIOPA (2017) insists that internal control should strengthen the internal operating environment of an insurance organisation. This means that there cannot be any risk management without proper internal controls. The board of directors of an insurance company is held responsible for promoting a risk management culture within the company, to emphasise the importance of internal controls (EIOPA, 2017). All personnel are therefore to understand their role in risk management in the organisation.

There is a need for the insurance industry to pinpoint their internal risk exposures.

EIOPA (2017) further assert that risks resulting from improper internal controls could pose serious obstacles to the achievement of the objectives of the insurance companies, supervisors, and policyholders. Since the risk assessment activities of an insurance organisation would be anticipated to be proportional to the size and complexity of its business, there is a need to assess and document the risks that the business can take and possible opportunities.

In light of the foregoing paragraphs, it can be deduced that insurance companies need reliable information at all levels within the organisation to enable them to define, achieve and review the objectives set by the board of directors. Communication is formal and informal, and internal and external. There is a need for insurance organisations to implement appropriate systems to monitor internal controls, and this should be a continuous process, which is evaluated regularly.

In recent years, many boards of directors of insurers in developed countries have adopted formal systems of responsibility for risk management (IAIS, 2006:6). IAIS further declares that about three decades ago, risk management was already an emerging practice in insurance companies in developing nations as well as in small companies. Most insurance companies in general have established risk policies for various individual risks, such as credit risk, insurance risk, liquidity risk, investment risk and operational risk. These policies often outline the objectives of the company in relation to specific risks, how this links to the risk strategy, and roles and responsibilities of personnel in managing the risks (IAIS, 2006:6).

4.12 Risk management by life insurers, non-life insurers, re-insurers and brokers

Literature seems to concur that all the major players, namely life insurers, non-life insurers, reinsurers and brokers, have common risks which may differ in magnitude according to the unique characteristics of each stratum (Swiss Reinsurance Company, 2004).

All the above players are faced with insurance risk, credit risk, market risk, operational risk, for example (Institute and Faculty of Actuaries, 2016:2; KPMG, 2015; PWC, 2008). This study, whose second secondary objective was to establish whether there were any differences in the responses in the questionnaire by the different strata, expected that, if there were any differences in responses, they would not be accounted for by the different risks faced by the different strata.

4.13 Empirical studies

This section reports on other research related to the current study in terms of methodologies, models used and their findings.

Kleffner, Lee and McGannon (2003) conducted a study on ERM focusing on public listed companies in Canada in 2001. Their study was based on a sample of 336 companies, and the target respondents were people who were primarily in charge of risk management in those respective companies. From 336 companies, 118 companies

(35%) responded to the survey. From the study, it was deduced that 31% of the companies that responded to the questionnaire had adopted ERM, 29% were putting together facts to make way for adoption of ERM, and 40% were just not practicing ERM. The details of the companies are not given in the study but can be assumed that insurance companies were part of the study. Although this study was carried out on an industry that is different from that of the current study, lessons on the methodology can be learnt from the study.

Yusuwan et al. (2008) conducted a study that focused on the risk management practices of construction project companies in Klang Valley, Malaysia. The study was meant to identify the level of risk management awareness, to examine the policy undertaken when dealing with risks in a construction project, and to identify the problems and challenges for the implementation of risk management. Questionnaires and interviews were used in the survey and 27 companies from both the public and private sectors were the respondents. From the study, it was concluded that, in terms of level of awareness and perception of risk management, 44.4% had heard about risk management occasionally, 29.6% had heard about risk management and attended risk management training, 14.8% had practised risk management and 11.1% had never heard about risk management at all. The findings indicated that almost half of the respondents (50%) believed that risk management could add value to daily work, while 33.3% believed that risk management was useful in times of crisis even it only benefits the organisation. Only 14.8% of the respondents had practiced risk management in their work.

The findings of the study by Yusuwan et al. (2008) give a general overview of risk awareness almost ten years ago. This then raises the expectations of risk management levels at the period of the current study.

A survey was conducted in 2009 by Everis (2009:20–26), a multinational consulting firm on risk management in the insurance industry in Europe and Latin America, after the global economic crisis. The study found that the insurance industry was immersed in a

permanent updating process, fostering the changes needed to adapt both to the new economic environments and to the growing levels of safety, transparency and effectiveness, which are increasingly being demanded by financial markets and citizens.

Therefore, the companies that participated in the study agreed that the insurance industry included risk control among its strategic objectives. However, the behaviour of the sectors was said not to be aligned with the said objectives. Compliance was found to be the main driving force for integral risk management.

Although this study was carried out in Latin America while the current study was carried out in Africa, the former does help to give a general atmosphere of the acceptance of ERM in the insurance industry. Knowing that the insurance industry was immersed in the implementation of risk management processes at the time helps postulate the estimated levels of risk management maturity at the time of the current study.

Another study was conducted by Coetzee and Lubbe in 2013 to assess the risk maturity of South African private and public sector organisations. The study adopted the risk maturity model of the Risk and Insurance Management Society (RIMS) (2006) and adjusted it to suit the South African corporate governance environment. The findings indicated that management's commitment to risk was generally lacking in both sectors and there was no effective risk management strategy (Coetzee & Lubbe, 2013:45–56). Methods used in the study by Coetzee and Lubbe (2013) were a helpful benchmark in the current study.

EY (2013), in response to the ERM implementation requirement which was to come in during 2014, carried out a survey with CROs, chief actuaries and risk and compliance managers from both life and short-term insurance companies. Key focus areas included risk identification and measurement, views on using economic capital in the business, effectiveness of risk management policy and own risk and solvency assessment (ORSA). The findings showed that most participants agreed that risk identification was

an important element although only 10–20 risks were tracked on an ongoing basis. Respondents considered it cumbersome to follow up over 100 risks.

The Singapore study further found that difficulties were faced in quantifying risks due to a lack of expertise and of credible data. Challenges were further expressed in the alignment of risk limits to enterprise-level risk appetite as part of the objective-setting process. Findings from the study indicate evidence of risk implementation in the organisations although challenges that could affect ERM maturity levels were encountered.

St. John's University and Proviti (2015) conducted a study to assess the readiness of insurance companies to prepare their ORSA Summary Report in 2015. This study, which was conducted in 2014, revealed that most organisations had a process for assessing adequacy for ERM. There was however no standardised process for measuring the ERM maturity levels within the industry.

Deloitte undertook a study in 2014, on the state of the insurance industry in Nigeria. They used the Deloitte risk management capability maturity model to measure the levels of risk management of the insurance companies in Nigeria. The conclusion of the study was that, at the time of the study, many insurance companies were situated somewhere between the ad hoc and comprehensive stages on the capability maturity model. The study also observed that, without the appropriate structure and governance model for their ERM framework, companies will find it increasingly difficult to attain the next level as they progress through the maturity stages, thus compromising the ability to maximise value from risk management activities. It would be impossible to achieve the highest levels of maturity without a solid ERM organisational structure in place (Deloitte, 2014a:5).

These findings imply that risks were not yet treated as a portfolio at enterprise level where they were not treated as correlated. This study, having been conducted in Nigeria, was a good benchmark for the current study in terms of methodology and the

development of the ERMMF for the Botswana insurance industry as it also dealt with ERM maturity levels of the insurance industry though in a different country.

Akotey and Abor (2013) conducted a study that examined the risk management practices of long-term insurers and short-term insurers through a comparative case study approach in Ghana. Their findings exhibited some similarities and some differences in the levels of risk management practices of the sort-term industry and the long-term industry. Their findings implied that there were no uniform responses in as far as their adoption of risk management was concerned.

The current study, unlike the studies by Yusuwan, et al. (2008), Kleffner (2003) and Coetzee and Lubbe (2013), was specific to the insurance industry. While a few of the studies highlighted above were conducted in the insurance industry, none was carried out in Botswana. Most of the researches (Akotey & Abor, 2013; Kleffner, 2003; EY, 2013; Yusuwan, et al., 2008) did not develop a clear framework to measure ERM maturity levels for the insurance industry. While Deloitte (2014b) came up with a framework to measure ERM maturity levels in Nigeria, it is not clear which ERM guidelines they used.

The current study used the COSO framework as a guideline in determining the ERM maturity levels in the insurance industry in Botswana. The COSO framework was chosen for this study as it was considered simple and comprehensive, unlike Solvency II. The developed framework is easy to follow for the targeted industry. In addition, having realised that organisations generally have been cited to have challenges in implementing ERM, the current study developed an ERMIP for the insurance industry in Botswana.

4.14 Conclusion

Chapter 4 examined risk-related issues in the insurance industry in general and also looked at the Botswana insurance industry in which the study was conducted. It was

noted that the insurance industry is faced with the same risks as those with which most financial institutions are faced and these risks could be managed in ways that were suggested in the chapter.

The Standard and Poor's evolution of ERM framework was presented (see 4.3). This enabled the researcher to indicate the estimated expected position of the insurance industry at the time of research in terms of ERM maturity. It was seen in this chapter that the insurance industry has many players, although the study involved insurers, re-insurers and brokers. Figures obtained from NBFIRA were relied on to give a full view of the insurance industry in Botswana.

In this chapter, it was understood that the regulatory authority plays a significant role in promoting implementation of ERM in the insurance industry. The regulator uses a number of instruments, including the Insurance Industry Act (No. 1 of 2016).

It has been cited that companies, including those in the insurance industry, are faced with challenges in the implementation of ERM. These comprise the environment within which the organisation operates, the commitment in terms of time and money by management and other employees, as well as obstacles in executing some activities in the actual implementation process.

Several studies were conducted on ERM, most of which did not develop a clear tool to measure ERM maturity. None however, was conducted in Botswana. It was intended that the current study should contribute to the knowledge in the insurance industry by developing an ERMMF for the insurance industry in Botswana. Chapter 5 shares the development of the ERMMF, i.e. the theoretical framework and the conceptual framework.

CHAPTER FIVE

AN ENTERPRISE RISK MANAGEMENT MATURITY FRAMEWORK

5.1 Introduction

The first chapter of this study discussed the research overview, indicating the research objectives and the methodology used to address the research objectives. Chapters two, three and four presented the literature review, looking at risk management in general and ERM and risk management from an insurance perspective, respectively.

Based on the literature review in the previous three chapters, Chapter five introduces the ERMMF. The framework utilises the COSO ERM model, which has eight components: internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring. At the time of the study, these were used as major variables, which were then disintegrated into five criteria that describe each of the components. The ERMMF therefore has 40 (8 components x 5 criteria) criteria in total. The weighted average of the determinants per component was subsequently used to measure each of the eight components' performance against the developed ERM maturity scale.

The ERMMF enabled the determination of ERM maturity levels per component and also in general. An organisation can therefore be assisted to determine its weak areas in as far as ERM is concerned. The following paragraphs discuss the theoretical framework and the conceptual frameworks of the developed ERMMF. Lastly, the chapter explains how the framework can be used to evaluate ERM maturity levels of organisations.

5.2 Theoretical framework

After examining several risk management frameworks discussed in three, the study found the COSO model to be user-friendly for the development of the ERMMF for use

by the insurance industry in Botswana. The eight COSO (2004) components as shown below were adopted.

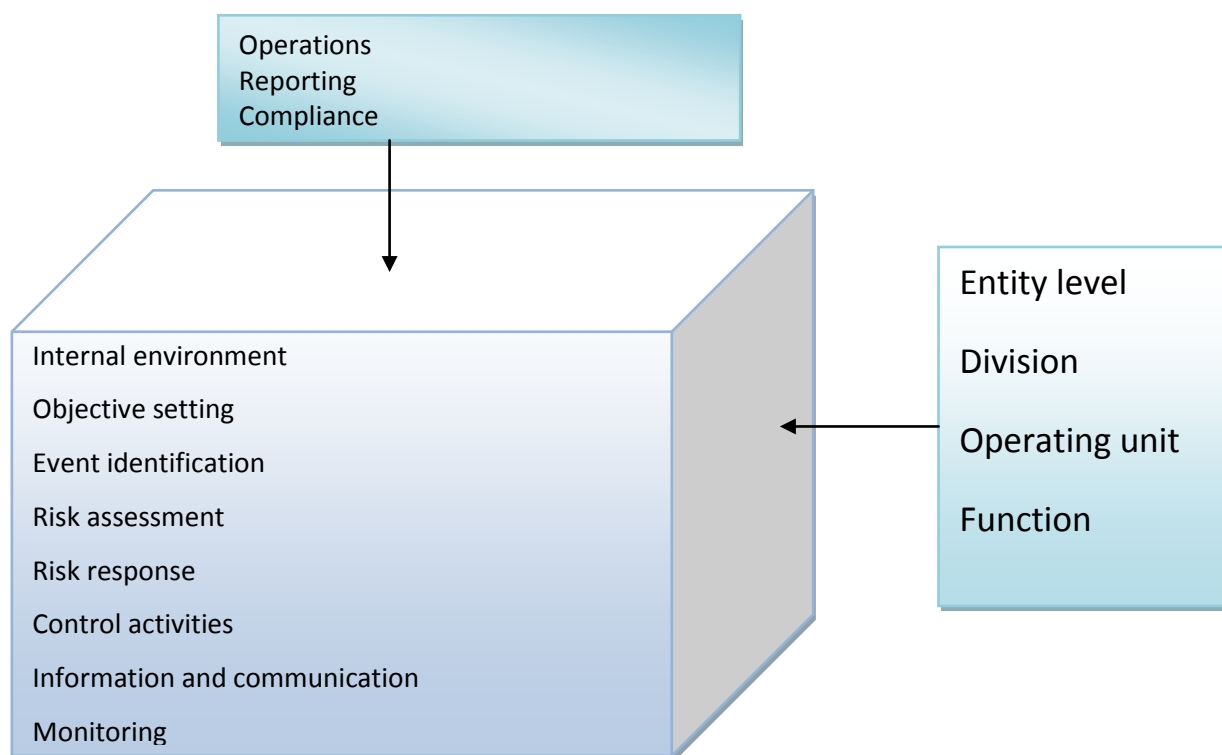


Figure 5.1: The COSO components of ERM

Adopted from COSO (2004)

Figure 5.1 depicts the three areas of emphasis in the ERM practice: operations, reporting and compliance. It also shows the levels at which an organisation could handle ERM: entity, division, operating unit or function, depending on the organisational structure. Finally, the last part of the blue cube in Figure 5.1 shows the ERM components that the organisation is advised to follow in the implementation of ERM.

These eight components are internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring.

COSO gives a description of each of the components (COSO, 2004), and the current study utilised these to deduce the determinants of the components, as shall be discussed later (see 5.2).

To develop the measuring scale, which is part of the framework, the Aon model (see 3.4.4) was used. The current research adopted the maturity levels of the Aon model, although the study developed its own descriptors for the ERMMF. Table 5.1 below shows the ERM maturity levels of the Aon model. However, the study developed attributes (descriptors) for the ERMMF.

Table 5.1: Levels and attributes of the Aon model

Model	Levels	Attributes
Aon (2010)	Initial/lacking Basic Defined Operation Advanced	Board-level commitment A dedicated risk executive in a senior-level position Risk management culture that encourages full engagement and accountability Engagement of all stakeholders Transparency of risk communication Integration of risk information into decision-making Use of sophisticated quantification methods Identification of new and emerging risks Risk management focused on extracting value

Source: Researcher’s own compilation

5.3 Conceptual framework

Figure 5.2 shows the development of the ERMMF by using the COSO and the Aon models. The study added an interpretation scale to give an interpretation of each maturity level to guide the users of the ERMMF. Section 5.4 discusses how the ERMMF works.

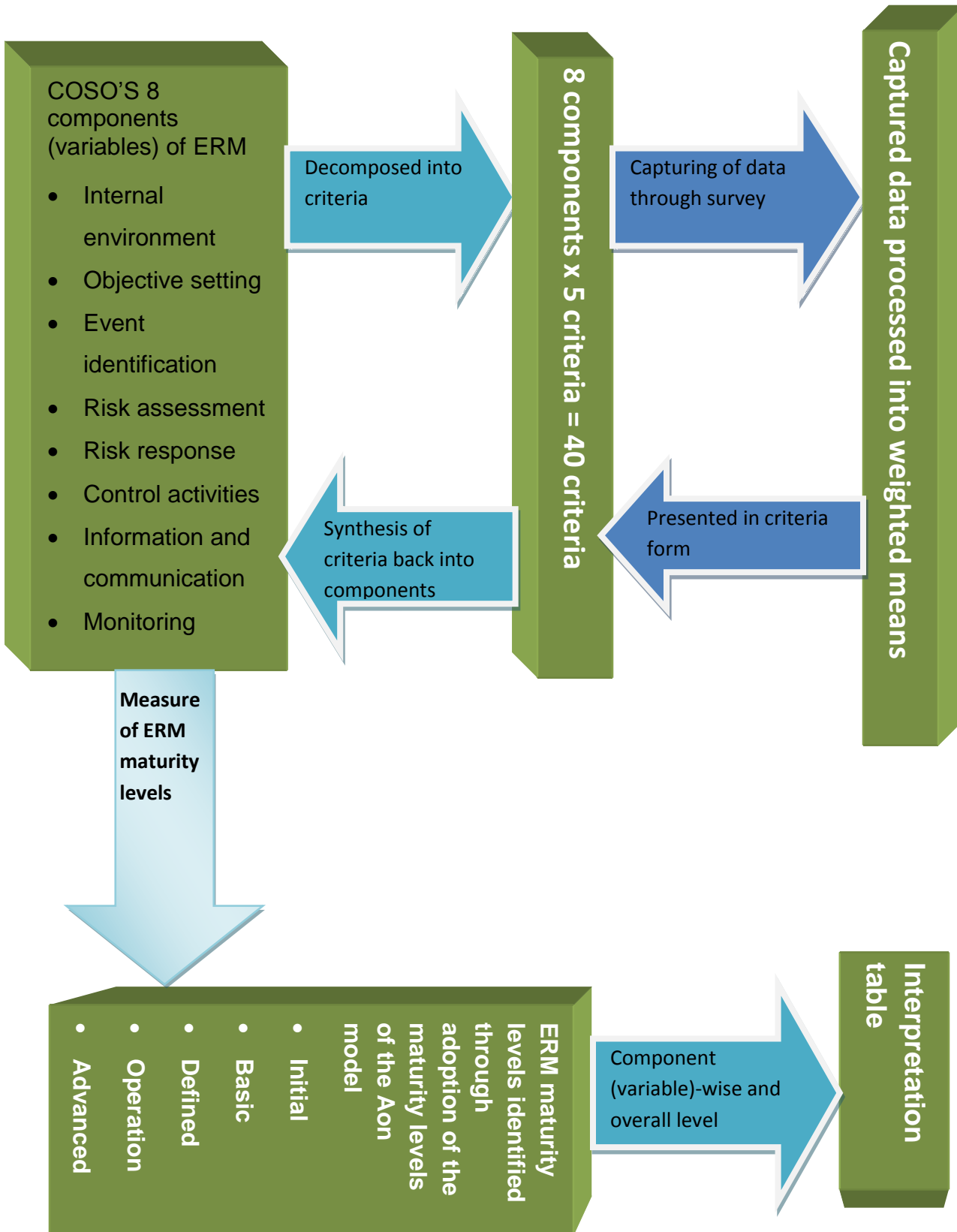


Figure 5.2: The conceptual framework

Source: Researcher's own compilation

5.4 An enterprise risk maturity framework

As mentioned in 5.1, the ERMMF proposed for the insurance industry in Botswana was developed based on the literature review, and the framework is discussed below.

For each of the eight components adopted from the COSO ERM framework, the assessment criteria were suggested. These were to be measured on a scale of 1–5 where 1 = Initial/lacking, 2 = Basic, 3 = Defined, 4 = Operational, and 5 = Advanced. The scale was developed after careful deliberation of several maturity models. The five levels were then adopted from the Aon model while the descriptors for each of the levels were developed by the researcher after a literature review on risk management and ERM. The developed scale also enables insurance companies to determine their overall ERM maturity levels over and above the component-wise maturity levels.

The criteria used to assess the maturity levels of each component will assist an insurance company to pay attention to the actual aspects that need to be improved in the event that its ERM maturity levels are not according to expected standards. Table 5.2 shows the prepared framework while Table 5.3 gives the interpretation table that was developed and used to interpret the findings.

The first column of Table 5.2 shows the eight ERM components (variables). The second column gives the indicators to measure each of the components. Column 3 indicates the five possible ERM maturity levels for each component. Finally, the last column depicts possible overall ERM maturity levels, and these are the same levels used per component.

Table 5.2: The ERMMF (ERMMF)

Variable/Component	Determinants	Variable maturity level	Overall maturity level
Internal environment	<ul style="list-style-type: none"> Clear policies and ethical standards Commitment to policies that include risk management and ethical behaviour by managers Qualification of management Employee involvement in risk management Clarity of organisational structure 	<ul style="list-style-type: none"> Initial Basic Defined Operational Advanced 	Initial
Objective setting	<ul style="list-style-type: none"> Company mission, strategy and communication of business objectives to the organisation Clarity of key performance indicators Risk tolerance and appetite reflection in objectives Identification of critical success factors in objective achievement Accommodation of stakeholders' interests in risk appetite establishment 	<ul style="list-style-type: none"> Initial Basic Defined Operational Advanced 	
Event/risk identification	<ul style="list-style-type: none"> Adequacy of mechanisms to identify risks Mechanisms to monitor changes in the external environment Involvement of all employees in risk identification Mechanisms to anticipate, identify and respond to routine events that could pose risks. Alertness to compliance issues 	<ul style="list-style-type: none"> Initial Basic Defined Operational Advanced 	Basic
Risk assessment	<ul style="list-style-type: none"> Presence of internal audit function Periodic risk assessments Board of directors overseeing and monitoring risk assessment process Proper expertise used to evaluate and quantify risks Severity and frequency of risks considered when assessing risks 	<ul style="list-style-type: none"> Initial Basic Defined Operational Advanced 	
Risk response	<ul style="list-style-type: none"> Risk appetite and risk tolerance drive risk response Trade-off or risks and rewards considered in handling risks Timely determination of steps to mitigate foreseen risks Regular strengthening of activities that respond to risks Strengthened risk prediction levels 	<ul style="list-style-type: none"> Initial Basic Defined Operational Advanced 	

Table 5.2 (Continued): The ERMMF (ERMMF)

Variable/Component	Determinants	Variable maturity level	Overall maturity level
Control activities	Development and implementation of appropriate policies and procedures for each major process Control activities relate to identified risks and internal controls Periodic review and update of policies and procedures Assets and information protection Relevant committee monitoring of internal controls	Initial Basic Defined Operational Advanced	Defined Operational Advanced
Information and communication	Mechanisms to obtain relevant external information Identification and regular communication of internal information critical to achievement of goals Information available on a timely basis Effective communication of information up, down and across the organisation Mechanisms for open and effective communication with all stakeholders	Initial Basic Defined Operational Advanced	
Monitoring	Monitoring of risk levels in line with the company risk appetite Incorporation of recommendations made by internal and external auditors Existence of a risk function with competent and experienced staff to monitor activities Discussion and review of risks at meetings at different levels Communication of risk control deficiencies to those who must take action	Initial Basic Defined Operational Advanced	

Source: Researcher's own compilation

Figure 5.3, on the next page, depicts a pictorial view of the ERMMF. The bottom of the model shows ERM components, the following category gives the component-wise measurement while the top shows the overall measurement.

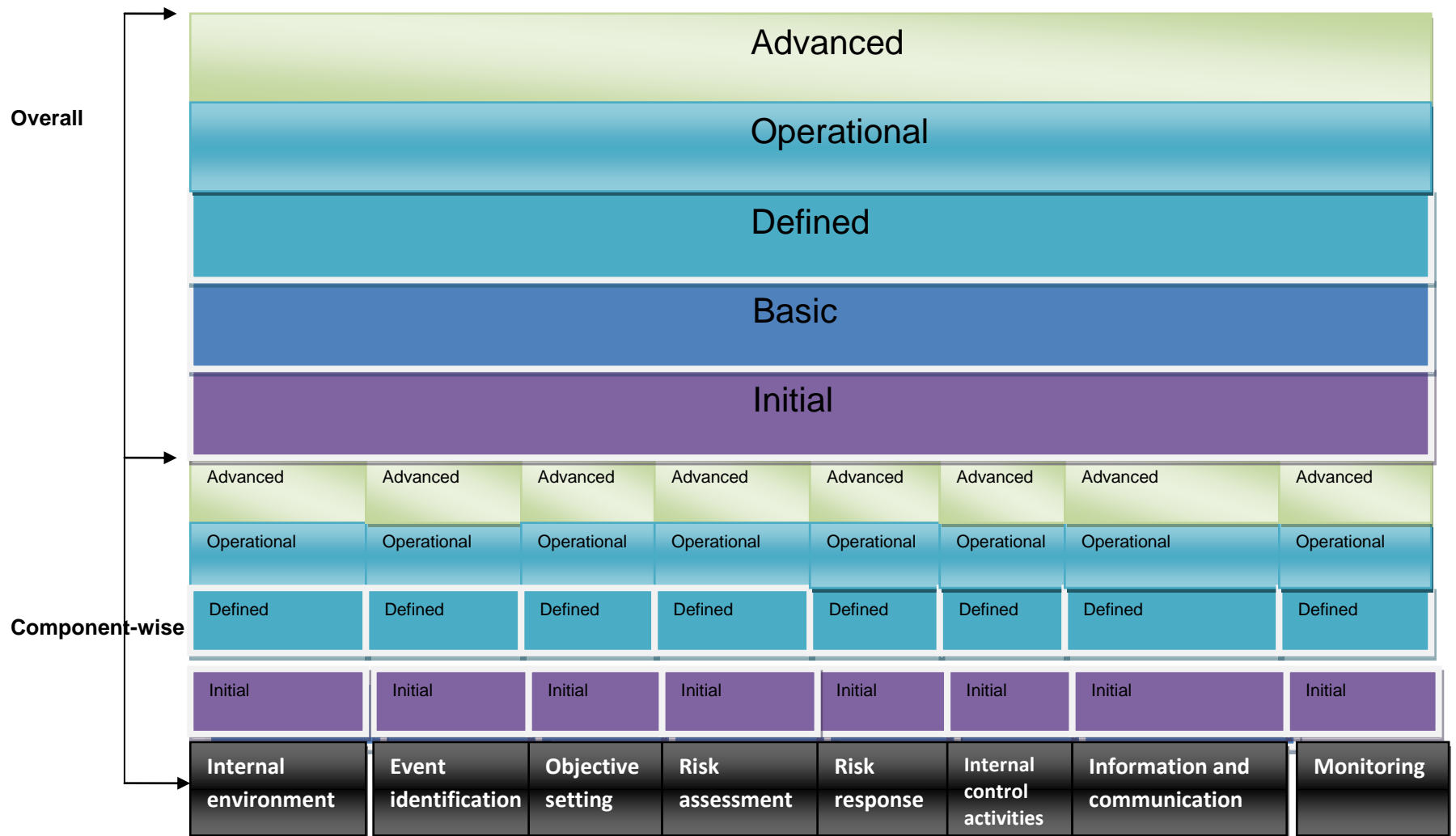


Figure 5.3: ERMMF

Source: Researcher's own compilation

Table 5.3 gives a verbal interpretation for each level of maturity. This is meant to assist users of the ERMMF to know what it means for the insurance industry to be at a particular level of ERM maturity.

Table 5.3: Interpretation table

Scale	Mean scale interval	Response	Verbal response
1	1.00–1.49	Initial/lacking	The ERM risk component is not developed. Nothing is in place to show movement in the direction of ERM.
2	1.5–2.49	Basic	There are pointers towards the development of ERM systems. Employees not fully involved yet.
3	2.5–3.49	Defined	The ERM system is in place. Employees are aware of it. Objectives are to meet both external and internal requirements. However, there is minimum implementation and follow-up.
4	3.5–4.49	Operation	There is a complete ERM framework and an independent risk management function. There is board-level support of ERM. All senior management is alert to risks in their functions.
5	4.5–5.00	Advanced	A holistic approach to risk management exists. Risk management process is ongoing.

Source: Researcher's own compilation

Figure 5.4 shows the interpretation graph with a verbal description shown in each box.

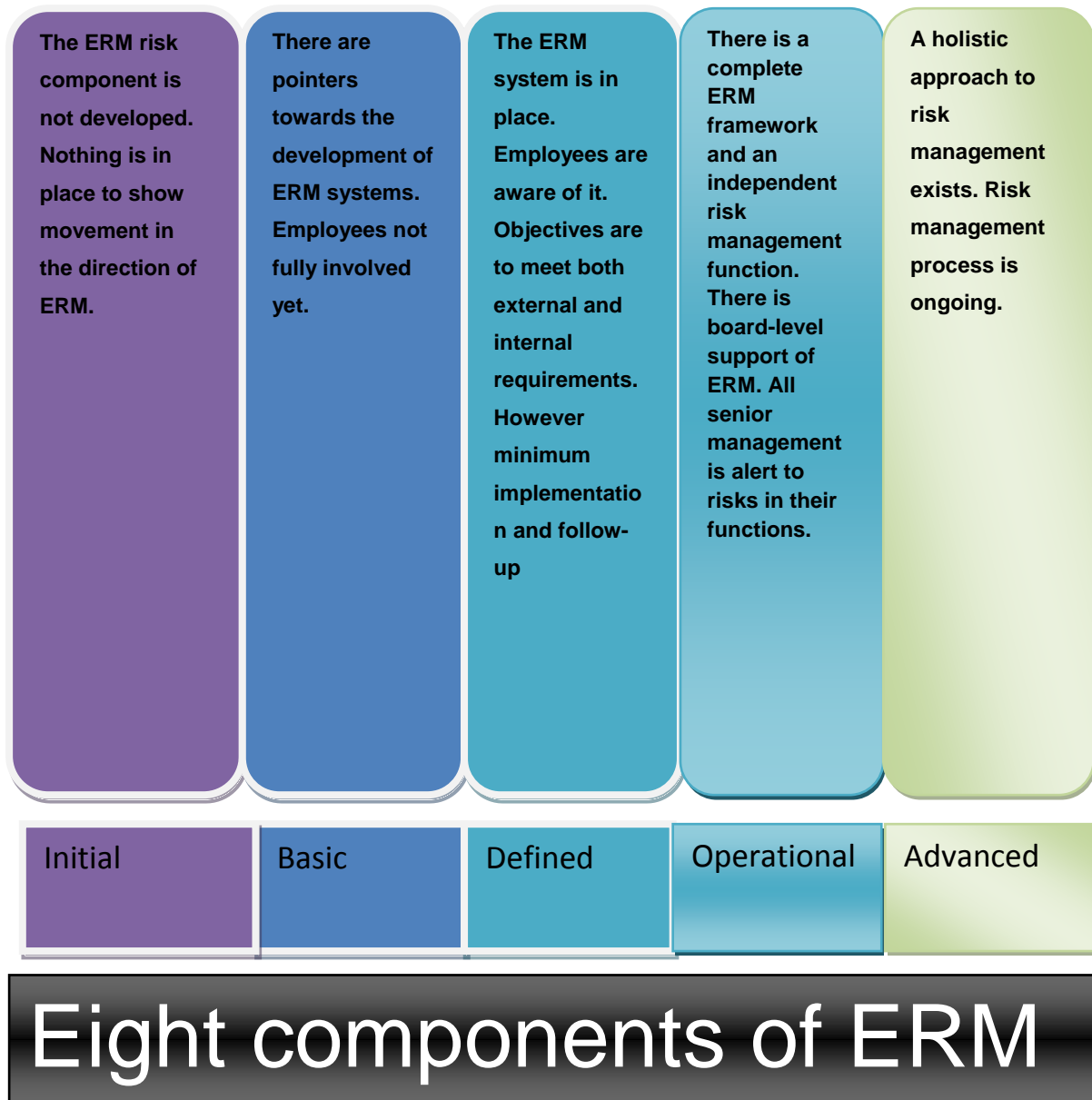


Figure 5.4: ERM interpretation graph

Source: Researcher's own compilation

For measurement purposes, the COSO ERM variables (components) were deconstructed into criteria, which confirmed those variables and were used to evaluate the extent to which each variable was applied by an organisation. After data had been captured the criteria were synthesised back into variables for analysis of data. When variables had been statistically analysed they were measured against the scale as indicated in Table 5.3.

The developed ERMMF was empirically used as a measure to evaluate the enterprise risk maturity level of the insurance industry in Botswana. The findings are discussed in Chapter six, and further recommendations are given.

5.5 Conclusion

Chapter five addressed the primary research objective, which was to develop a ERM framework to assess ERM maturity levels of the insurance industry in Botswana. Background to the development of the framework was given thereby making known the models adopted.

In this chapter, it was explained that the COSO ERM framework was adopted for use in the development of ERM maturity measurement criteria. The COSO framework was identified as having eight components, and the eight components were each decomposed into five criteria to facilitate the measuring process. The chapter then discussed the use of the Aon maturity model in the development of the ERM maturity measuring scale.

Although the levels of maturity were adopted from the Aon model as they were, the descriptors for each were not adopted. They were developed as part of the study. An interpretation scale was thus displayed (see Section 5.3) to describe each of the five ERM maturity levels: Initial, Basic, Defined, Operational and Advanced.

The chapter showed the COSO model (see Section 5.2) and the Aon model (see Section 5.2) independently and then later merged the two to show the conceptual

framework of the developed ERMMF (see Section 5.3). To complete the conceptual framework, the measuring scale was also attached (see Figure 5.4). The developed model was used empirically to evaluate the ERM maturity levels of the Botswana insurance industry.

Chapter six deliberates on the research methodology. It gives details on the research process in line with what the literature suggested. The chapter imparts the roadmap of the whole research.

CHAPTER SIX

RESEARCH METHODOLOGY

6.1 Introduction

Chapter one set the background of the study and elucidated the research objectives. Chapter two expounded on risk management, based on the literature reviewed. Chapter three examined ERM, setting it aside from traditional risk management. Chapter four dwelt on risks affecting the insurance industry and the management of those risks. The literature review formed the basis for the development of the model for measuring ERM maturity levels in the insurance industry and the formation of the ERMIP for insurance companies. Chapter five introduced the ERMMF.

Chapter six discusses the research methodology, considering different types of approaches that can be used. It then indicates the approach that this study took. Lastly, different research designs are discussed. The target population of the study is also delineated. The chapter explains how the sample was selected, discussing several methods of data collection. Chapter six further refers to the ethical considerations in the study.

Firstly, general ethical issues are explored. Following this, ethical issues specific to each step of the research process are detailed. These are ethical issues, which were applied during design and gaining access to organisations, ethical issues during data collection, ethical issues during data processing and storage and ethical issues relating to analysis and reporting of findings. The chapter clearly identifies steps that were taken to comply with ethical requirements.

Issues pertaining to the instrument design are raised, clearly stating how validity and reliability were ensured. The chapter finally explains how data was analysed in order to meet the research objectives of the study. The chapter discussion is then summarised in the last section of the chapter.

6.2 Methodology and research design

Methodology and research design are generally discussed in this section. The discussion further concentrates on the methodology and research design of the current study.

6.2.1 Methodology

The research methodology is the way to solve the research problem systematically. It clarifies the various steps that are generally adopted by a researcher in studying the research problem along with the logic behind them (Chauhan, 2012:13). The way in which research is conducted may be conceived in terms of the research philosophy subscribed to, the research strategy employed and thus the research instruments used or developed to meet the research objectives (Bhandarkar, Wilkinson & Laldas, 2009:76). A research philosophy is a belief about the way in which data about a phenomenon should be gathered, analysed and used (Chauhan, 2012:14). Blanche, Durrheim and Painter (2006:7) elucidate two major research philosophies, namely positivism (also known as scientific or quantitative approach) and interpretivism (also called anti-positivism or qualitative approach) and paradigm of praxis (also called constructionist approach) (Blanche et al., 2006:6).

Positivists believe that reality is stable and can be observed and described from an objective viewpoint, that is, without interfering with the phenomena being studied (Blanche et al., 2006:7).. Phenomena can be isolated and observations are repeatable, and thus predictions can be made on the basis of the previously observed and explained realities and their interrelationships (Blanche et al., 2006:8). This therefore involves a belief in an objective reality, knowledge of which is only gained from sense data that can be experienced and verified directly between independent observers (Kuada, 2012:76).

Interpretivists, on the other hand, contend that only through the subjective interpretation of and intervention in reality can that reality be fully understood. Scientists cannot avoid

affecting those phenomena they study (Chauhan, 2012:39). This kind of approach contains such qualitative methodological approaches as phenomenology, ethnography, and hermeneutics, and is characterised by a belief in a socially constructed, subjectively based reality, one that is influenced by culture and history (Raiyani, 2012:107).

The paradigm of praxis deals with the disciplines and activities predominant in the ethical and political lives of people (Raiyani, 2012:108).

Qualitative and quantitative research approaches were used in this study. The qualitative approach was used to review literature to gather information to develop the proposed ERMMF and the ERMIP, which were the primary research objective and the third secondary research objective, respectively. The quantitative approach was applied to address secondary research objectives one and two by using a coded research tool (questionnaire).

The positivistic measuring criteria of validity, reliability and practicality were used for both positivistic and anti-positivistic approaches as these measurement indicators provide valid quality checks (Kuada, 2012:74).

6.2.2 Research design

The research design is the conceptual structure within which the research is conducted, a blueprint for the collection, measurement and analysis of data (Bhandarkar et al., 2009:181; Bhattacharyya, 2010:40). There are three broad classifications of research design as described in the paragraphs below.

The **exploratory** research design, which is also called a formulative research design, aims at formulating a problem for a specific idea or hypothesis (Bhattacharyya, 2010:41). It is a valued means of establishing what is transpiring, to ask questions and to assess incidents in a new light (Bhandarkar et al., 2009:101). This design employs three methods:

- doing a survey of related literature by studying past studies and contributions relating to the field of study intensively, so that the research problem is easily formulated;
- conducting an experience survey, which refers to undertaking collection of details and having discussions with experienced people in the chosen field of research. This determines the extent to which the researcher is original and thus avoids duplication;
- and making an analysis of insight-stimulating examples (Appannaiah, et al, 2010:42–43).

The current study engaged the exploratory approach using the literature review method in order to address the primary research objective and the third secondary research objective.

An **experimental/explanatory** research design mainly focuses on determining the cause-and-effect relationship of the phenomenon under study (Saunders, Lewis & Thornhill, 2009:140). In the event where the observation is arranged and controlled, this becomes an experimental study (Appannaiah et al., 2010:52, Blanche et al., 2006:44). This approach was used to address secondary research question two.

A **descriptive diagnostic** research design is concerned with research studies that explore the portrayal of the characteristics of a group or individual or a situation (Bhandarkar et al., 2009:113). The main purpose of the study that uses this design is to acquire knowledge (Blanche et al., 2006:44). This research design employs two methods: the case study method and the statistical method (Raiyani, 2012:35–36). The current study does also adopted a descriptive approach as it was concerned with identifying the phenomenon, a description of the ERM maturity level of the insurance industry in Botswana.

6.3 The target population

The population, also known as the universe, refers to the aggregate of data sources (Raiyani, 2012:45).

For this study, the population comprised the long-term insurance companies, short-term insurance companies, reinsurance companies and brokerages. According to the NBFIRA annual report (2015), there are 9 long-term insurance companies, 11 short-term insurance companies, 3 reinsurance companies and 44 brokerages in Botswana. Most of these companies are headquartered in the capital city, Gaborone. The population is summarised in Figure 6.1.

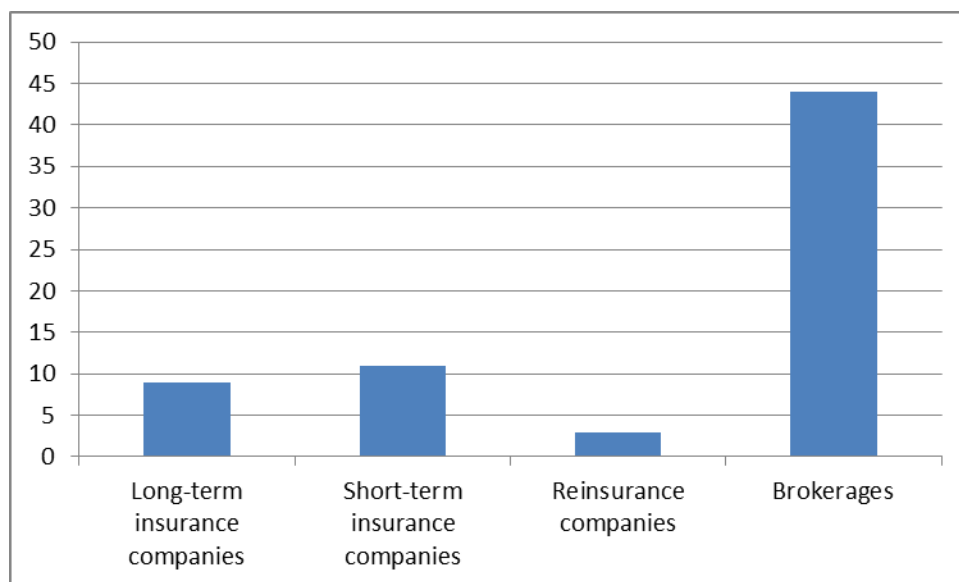


Figure 6.1: Population of the study in terms of organisations

Each of the organisations was found to have on average two risk management personnel. The preliminary overview estimated the holders of such positions to be 134.

6.4 Sample selection

Statistics requires a volume of data to analyse and then to interpret the results to arrive at a meaningful conclusion (Appannaiah, et al., 2010:73). Primary data could be collected using a sampling method which refers to the collection of data from a few elements of the universe. Sampling brings about problems such as the fact that 100% representation of a population cannot be achieved in sampling (Sachdeva, 2009:149).

However, to solve the operational problems of sampling, laws of sampling were developed (see Bhandarkar et al., 2009:271). The two laws, the law of statistical regularity (see Appannaiah, et al., 2010:75-80) and the law of inertia of large numbers (see Sachdeva, 2009:149).), emphasise that when a moderately large number of items are selected at random from a large group the sample would almost, on average, possess the characteristics of a large group. The larger the sample the more representative it is of the population and the more accurate the results (Bhandarkar et al., 2009:271).

There are two broad methods of sampling: random or probability sampling and non-random or non-probability sampling. Random sampling is the preferred method of the two as it gives every element an equal chance of being selected (Blanche et al., 2006:139). The different types of random sampling are the lottery method, the table of random numbers, and restricted random sampling (Appannaiah, et al., 2010:76-77).

The **lottery method** assigns a number to each item in the population, the numbers are put in a bag, and the required number of items is selected.

The second method employs the **table of random numbers** to select the number of required items for the sample (Saunders et al., 2009:222–225).

Restricted random sampling follows a specific principle in selecting the sample elements. This method can be further divided into stratified random sampling, systematic random sampling, and cluster sampling (Krishnaswami & Satyaprasad, 2010:52–80).

Stratified random sampling first divides the population into different strata and the items in each stratum are homogeneous. From each stratum, a number of elements are selected to constitute a sample. If the same number of items is selected from each stratum, the method becomes proportionate stratified random sampling. This method is

commended for its generation of a representative sample although it requires a lot of care and pre-planning (Saunders et al., 2009:228–229; Trochim & Donnelly, 2008:44).

Systematic random sampling selects the first unit at random, and then the remaining items are selected at evenly spaced intervals.

In **cluster** sampling, samples are selected at different stages. The population is divided into different stages so that samples are selected at each stage based on the specified characteristics (Blanche et al., 2006:6, 134–138; Raiyani, 2012:50–53, Trochim & Donnelly, 2008:43–45).

Sampling

Krishnaswami and Ranganatham (2009) define sampling as the process of selecting a portion of the population to represent the entire population. For purposes of this study, 19 respondents were selected from the 11 short-term insurance organisations, 15 from the 9 long-term insurance companies, 5 from the 3 reinsurance companies and 75 from the 44 brokerages. This brought the sample to a total of 114. In other words, in terms of the organisations, the whole population was used. However, when it came to the estimated population of possible respondents, 114 respondents were sampled from 134 guided by the formula described below.

The study employed proportionate purposive sampling as the four separate types of business were each considered a stratum. The number of respondents was determined by using the formula of Tabachnik and Fidell (2001) as explicated in the following paragraphs. The findings from the calculations indicated that each company had to complete at least one questionnaire. In addition to that, other organisations were required to complete two. The determination of which companies were to complete two questionnaires was purposively done through looking at the size of the organisation.

To find the sampling size, the following equation, as submitted by Tabachnik and Fidell (2001:117), was applied:

$$N = 50 + 8m \text{ (where } m \text{ is the number of independent variables).}$$

There were 8 variables being the 8 components of the COSO model. This implied that the sample was to be 114 (out of the estimated 134) respondents coming from the 4 strata. The 114 was calculated as follows:

$$\begin{aligned} N &= 50 + 8m \\ &= 50 + (8 \times 8) \\ &= 50 + 64 \\ &= 114. \end{aligned}$$

To find the desirable number of respondents per strata, 114 total respondents were distributed among the 67 organisations through proportionate weighting. Table 6.1 summarises the population and sample in terms of number of companies as well as in terms of number of potential respondents.

Table 6.1 Population and sample

Organisation	Company-wise population	Staff-wise population	Company-wise sample	Staff-wise sample
Short-term insurance	11	22	11	19
Long-term insurance	9	18	9	15
Reinsurers	3	6	3	5
Brokerages	44	88	44	75

Source: Researcher's own compilation

Table 6.2 shows the use of proportional stratified sampling to find the number of respondents to obtain from the respective strata.

Table 6.2: Determination of the sample

Enterprise	Working	Desired number from strata
Short-term insuranceⁱ	114 (11)	19
	67	
Brokersⁱⁱ	114 (44)	75
	67	
Long-term insuranceⁱⁱⁱ	114 (9)	15
	67	
Reinsurance^{iv}	114 (3)	5
	67	
Total		114

Source: Researcher's own compilation

Notes:

- There were 11 short-term insurance companies out of the total of 67 insurance organisations at the time of the study. From the 114 desired respondents as calculated using the formula above, a proportion equivalent to $11 \div 67$ was taken from the short-term strata (=19).
- There were 44 brokers. From the 114 desired respondents as calculated using the formula above, a proportion equivalent to $44 \div 67$ was taken from the brokerage strata (=75).
- There were 9 long-term insurance companies. From the 114 desired respondents as calculated using the formula above, a proportion equivalent to $9 \div 67$ would be taken from the long-term strata (=15).
- There were 3 reinsurers. From the 114 desired respondents as calculated using the formula above, a proportion equivalent to $3 \div 67$ would be taken from the short-term strata (=5).

The reasons for and implications of the response rate are not discussed at this point as they are discussed in Chapter seven.

6.5 Data collection method and sources

Data can either be primary (that which is collected for the first time) or secondary (that which had already been collected and which is now either published or unpublished.)

Primary data can be sourced through, but not limited to, observations, interviews and questionnaires (Krishnaswami & Satyaprasad, 2010:86).

When using **observation**, the observer records whatever he/she is observing in the field in order to relate the data to explain some phenomena (Raiyani, 2012:74). In general, systematic observation conducted in the public domain is highly automated. It is thus recommended that systematic observation be conducted from hidden vantage points (Blanche et al., 2006:309).

Interviewing is a method in which the investigator and the respondent meet, and questions raised are answered and recorded. The method is used when details regarding any confidential matter are to be collected or when authentic information about anything is to be obtained, or when the research requires data collection directly from the respondents or if there is no other way of collecting data (Blanche et al., 2006:297). Interviews can be structured or unstructured (Krishnaswami & Satyaprasad, 2010:100).

In *structured* interviews, the person collecting the information decides, in advance, the nature and scope of the questions to be asked and the persons to be contacted, among other things. At the time of the interview, no deviation is made from the questions to be asked. This method has the advantage that the interviewer is well prepared, which leads to a focused interview (Bhandarkar et al., 2009:203). This saves time, and more information can be collected as per the interviewer's need. An *unstructured* interview is conducted on the spot without any preparations or advance information for the respondent. Although this method lessens the scope for bias it might not capture all the desired information (Raiyani, 2012:76–78).

Primary data can also be collected using the **questionnaire** method. A questionnaire is defined as a sheet of paper containing questions relating to specific aspects, regarding which the researcher wants to collect the data (Bhandarkar et al., 2009:198). The questionnaire is administered to the respondent to fill in and to provide the required

information. Although responses can be poor when it comes to a questionnaire, it is generally cheap and does not interfere with the respondent while he/she is answering the question (Raiyani, 2012:85–86). Questionnaires tend to be used for descriptive or explanatory research (Bhandarkar et al., 2009:199).

Questionnaires may be used as the only data collection method but they can also be linked with other methods, such as interviews (Saunders et al., 2009:362). More details of a questionnaire are discussed in section 5.7.

Secondary data can be obtained from books, periodicals or journals, research theses or dissertations, bibliographies, footnotes, encyclopaedias, statistical data sources, and directories and yearbooks (Bhandarkar et al., 2009:159). For purposes of this study, secondary data was obtained during the review of literature. This helped put the study in context by showing how it fits into the risk management field. This further facilitated identification of knowledge gaps, and issues and variables related to the research. Primary data was collected using a questionnaire.

6.6 Instrument design

A good research instrument must show some characteristics. The first part of the questionnaire should specify the object or purpose for which the information is required. An assurance must be given to the respondent that the information which is furnished will be kept confidentially. Introduction of the person collecting information should be clear, and this could be part of the questionnaire or included in a letter enclosed with the questionnaire. Guidelines for constructing a questionnaire are the following:

- Questions should be constructed using simple language.
- Sentences should be kept short, specific and clear, and personal questions should be avoided.

- Questions are to be given in sequence, and must not require any referencing before answering. This means questions should not force the respondent to recall from memory to answer.
- Questions requiring computations or questions on sentiments/beliefs should be avoided.
- Questions must not be repeated.
- Any instructions pertaining to completing the questionnaire must be given separately specifying the question number.
- The questionnaire layout must be attractive to motivate the respondent to complete it while sufficient space should be left for answering questions.
- Finally, instructions regarding returning the questionnaire must be clearly given (Bhandarkar et al., 2009:178; Raiyani, 2012:83–84).

The first section of the questionnaire used in this study captured company details, which mainly aimed at determining the nature of business in which the organisation was involved. This had to assist in stratifying the organisation. The second section captured data which contributed towards determining the ERM maturity level. Thus, the second section contained mainly the variables that enabled the determination of ERM maturity levels based on the scorecard developed from ERM principles as recommended by COSO (2004) in the ERM-integrated framework. Appendix 1 shows the questionnaire used in this study.

The designed instrument was piloted using one insurance company, and it was refined before finalisation and sending it to respondents. The final questionnaire was then hand-delivered to the participants by the researcher and a research assistant. The process of delivering the questionnaire and collecting them after completion took around three months, which spanned from March to May 2016.

6.6.1 Validity

An instrument is valid if it measures what it is intended to measure, and accurately achieves the purpose for which it was designed (Bhandarkar et al., 2009:183) . It is the

best available approximation to the truth of a given proposition, inference, or conclusion (Trochim & Donnelly, 2008:20). The researcher needs some kind of assurance that the instrument being used will result in accurate conclusions. Validity involves the appropriateness, meaningfulness and usefulness of inferences made by the researcher on the basis of the data collected. Validity can be improved by using a broad sample content rather than a narrow one, and by putting emphasis on important material and written questions to measure the appropriate skill (Chauhan, 2012:217).

Conclusion validity has to do with whether there is a relationship between the two variables, that is, whether there is a relationship between the cause and effect (Trochim & Donnelly, 2008:22–23).

Internal validity in relation to questionnaires refers to the ability of a questionnaire to measure what one intends it to measure (Saunders et al., 2009:372). It considers the causal claim of the researcher assuming that there is a relationship between the variables (Trochim & Donnelly, 2008:23).

Content validity refers to the extent to which the measurement device provides adequate coverage of the investigative question (Saunders et al., 2009:373).

Criterion-related validity/**predictive** validity is concerned with the ability of the measures (questions) to make accurate predictions (Saunders et al., 2009:373).

Construct validity refers to the extent to which the measurement questions actually measure the presence of those constructs one intends them to measure. Such constructs include attitude scales, aptitude and personality tests (Saunders et al., 2009:373).

External validity confirms whether the same instrument can be generalised to other persons, places or times. This is important because the researcher is likely to make some claims that the research findings have implications for other groups and

individuals in other settings and other times (Krishnaswami and Ranganatham 2009:120).

To test the validity of the instrument in this study, the relevant expertise of a statistician, the supervisor and an industrial specialist was used. In addition, one company was used as a pilot study.

6.6.2 Reliability

Reliability relates to the consistency of the data collected (Chauhan, 2012:218; Saunders et al., 2009:374). Mitchell (1996, cited in Saunders et al., 2009) outlines three common approaches to assessing reliability: test–retest, internal consistency and alternative form.

Test–retest estimates of reliability are obtained by correlating data collected with data from the same questionnaire collected from under as near equivalent conditions as possible. This implies the need to administer the questionnaire twice to respondents.

Internal consistency involves correlating the responses to each question in the questionnaire with those to other questions in the questionnaire. This measures consistency of responses across either all of the questions or of a sub-group of the questions in the questionnaire. The measure frequently used for internal consistency is Cronbach’s alpha (see Krishnaswami & Ranganatham, 2009:105).

The **alternative form** offers some sense of the reliability within one’s questionnaire through comparing responses to alternative forms of the same question or groups of questions. This method again may burden the respondents with fatigue (Saunders et al., 2009:373-374).

In order to improve the reliability of the questionnaire, the researcher used Cronbach’s alpha, which is a common measure of internal consistency reliability used to test reliability. Cronbach’s alpha provides a coefficient of inter-item correlations, i.e. the

correlation of each item with the sum of all the other items (Cohen et al., 2007:506). For this study, it was found to be 0.9, thus rendering the questionnaire reliable.

6.7 Measuring scale

Scaling is the branch of measurement that involves the construction of a measure based on associating qualitative judgments about a construct with quantitative metric units (Krishnaswami & Ranganatham, 2009:237). A scale is typically designed to yield a single numerical score that represents the construct of interest (Krishnaswami & Ranganatham, 2009:99). A response scale is the way responses are collected from people on an instrument. It can be a dichotomous response scale, like Agree/Disagree or True/False, or an interval response scale, using a 1 to 5 rating (Trochim & Donnelly, 2008:129).

The current study used the Likert-type interval response scale since a quantitative approach was used in the research. This is the process of developing a scale in which the ratings of the items are summed to get the final scale score (Trochim & Donnelly, 2008:136). Respondents rated each item on a 1 to 5 response scale as follows: 1 = Strongly disagree; 2 = Disagree; 3 = Undecided; 4 = Agree and 5 = Strongly agree. The final score for the respondent on the scale is the sum of his or her ratings for all the items (Krishnaswami & Ranganatham, 2009:243).

6.8 Analysis of data

The study handled quantitative data in the way recommended by Raiyani (2012). Before data was analysed, it went through processing, which subjected the data collected to a process in which the accuracy, completeness, uniformity of entries and consistency of information gathered were examined. This entailed editing, coding, classification and tabulation of the data collected.

'Editing' in this context refers to rectifying, setting in order, correcting or establishing a sequence (Singh, 2006:223). Any mistakes in the data are eliminated. Thereafter, data is coded, which is a practice that simplifies recording of answers. Each answer is assigned a code. This is done to save time and avoid confusing answers. Data is then classified into groups on the basis of some common characteristics. Following that, the classified data is arranged in an orderly manner (tabulation). Tabulation helps to conserve space (Singh, 2006:229-231).

6.9 Ethical considerations

Research is carried out in real-world circumstances, and entails communication with the people involved. The researcher(s) has to pay serious attention to ethical considerations in carrying out his/her study. In research, 'ethics' refers to the appropriateness of one's behaviour in relation to the rights of those who become the subject of their work (Saunders et al., 2009:183–184).

This therefore emphasises the necessity to ensure that the relevant persons, committees and authorities have been consulted and that the principles guiding the work are accepted in advance by all (Krishnaswami & Ranganatham, 2009:28). All participants must be allowed to be part of the work, and the rights of those who do not wish to participate, must be respected. The development of the work must remain transparent and open to suggestions from others. Permission must be obtained before making observations or examining the documents produced for other purposes (Chauhan, 2012:216–217). The researcher must also accept responsibility for maintaining confidentiality (Raiyani, 2012:112).

Participation should be completely voluntary. It is nevertheless noted that voluntary participation could conflict with the need to have a high response rate. High response rates tend to eliminate bias. To encourage a high response rate, researchers are advised to use multiple contacts per potential participant but any possible harm to the

participants must be circumvented (National Advisory Board on Research Ethics, 2009:6).

Harm to participants could include embarrassment or feeling uncomfortable about a question. The participants' identity must be protected by exercising confidentiality and anonymity. All prospective respondents must know the purpose of the research and the organisation that is sponsoring it, if sponsored. Both the methods and the results of the surveys must be reported responsibly to professional colleagues in the educational community (Chauhan, 2012:216–217). Different authors have pointed out different ethical issues, which Saunders et al. (2009) classified into the categories described in 6.9.1–6.9.5.

6.9.1 General ethical issues

These relate to privacy of possible and actual participants, the voluntary nature of participation and the right to withdraw partially or completely from the process. This also includes issues of consent and possible deception of participants, maintenance of the confidentiality of data provided by individuals or identifiable participants and their anonymity, and reactions of participants to the way in which one seeks to collect data, including embarrassment, stress, discomfort, pain and harm (National Advisory Board on Research Ethics, 2009:5–6).

6.9.2 Ethical issues during design and gaining access

Researchers must not apply any pressure to intended participants to gain access. Individuals have a right to privacy, and should not feel pressured into participating. Participants also have a right to full information about the research (European Commission, 2010:34; Saunders et al., 2009:192).

6.9.3 Ethical issues during data collection

Once participants have consented to take part, they still have the right to withdraw and the right to decline to take part in a particular section of the research. The researcher

must keep to the aims of the research project as initially agreed with the participant (National Advisory Board on Research Ethics, 2009:10).

6.9.4 Ethical issues associated with data processing and storage

Researchers should get advice that is appropriate to the particular circumstances of the research if it involves collection and processing of personal data. Sensitive personal data includes the participant's racial or ethnic origin, political opinions, religious or other similar classes (European Commission, 2010:76–80).

6.9.5 Ethical issues related to analysis and reporting

The researcher is required to maintain objectivity to ensure that he/she does not misrepresent the data collected. This can be achieved by avoiding being selective about the data to report or misrepresenting its statistical accuracy (National Advisory Board on Research Ethics, 2009:10; Saunders et al., 2009:187–199). The researcher upheld the following ethical considerations:

- The study went to the University of South Africa Research Ethics Committee for approval. The committee examined all the avenues of the research to ensure that it did contravene any ethical guidelines.
- The participants were informed of the benefit of this research. Participants were further informed of the nature of the questionnaire, and that their participation in the research was voluntary. They were under no obligation to answer any questions with which they were not comfortable. They were free to withdraw from participating if they felt uncomfortable, even after they had started participating. They were also asked to sign the informed consent form.
- Confidentiality and anonymity of participants were maintained. Participants were informed that no survey data would be made available to any other party apart from the statistician. The statistician signed a confidentiality consent form agreeing not to use the data for purposes other than assisting the researcher to analyse the research and interpret the findings.

- Finally, findings of the study will be made available to the participants through NBFIRA.

6.10 Conclusion

Chapter six started by discussing different methodological approaches and research designs in a study. These different approaches were expounded, finally indicating the methodology and research design followed by the current study.

The population and the sample were defined and different sampling methods discussed. This led to the definition of the population and sample of this study. The method used to arrive at the sample size was explained together with the sampling method used.

The chapter reported on issues of validity and reliability of the instrument. It was further clarified how the researcher ensured the validity and reliability of the research instrument used in the study.

The data collection method chosen for the current study was justified after consideration of other possible methods. This section indicated how data would be analysed for the interpretation of the findings.

The chapter concluded by considering important ethical issues since the study involved human subjects. Ethical considerations were deliberated on from the survey design, collection of data, data storage and reporting of findings. Issues that were considered were highlighted, indicating how the current study catered for those issues.

Chapter seven discusses the findings of the study according to the objectives of the study. In this chapter, the ERMMF and the ERMIP are presented.

CHAPTER SEVEN

RESULTS: PRESENTATION AND DISCUSSIONS OF THE RESULTS

7.1 Introduction

Research objectives were elucidated in the first chapter of this thesis, and Chapters two, three and four examined literature that was useful in the fulfilment of the research objectives. Chapter five revealed the ERMMF that was prepared in fulfilment of the primary research objective. Chapter six captured the methodology that was used to answer the research questions.

The primary objective of the study was to develop an ERM framework to assess ERM maturity levels of the insurance institutions in Botswana.

The secondary objectives of the study were as follows:

- to provide a literature overview to prepare an ERM framework to assess the ERM maturity levels of the insurance industry in Botswana;
- to evaluate the ERM maturity levels of the insurance industry in Botswana empirically;
- to establish whether there were differences in responses among different strata within the insurance industry in Botswana; and
- to recommend an ERM implementation procedure for the insurance industry in Botswana.

The primary research objective and the first secondary research objective were addressed through review of literature in Chapters two, three and four. Chapter five then revealed the climax of the fulfilment of the primary research objective, by presenting the developed ERMMF. Chapter six presents the findings of the study in accordance with the requirements of secondary research objectives two, three and four. As part of the

second secondary objective, the thesis reports on the ERM maturity level of the insurance industry in Botswana on the basis of the eight components proposed in the model as well as in general. In addition, the chapter compares responses from each of the four strata: short-term insurers, long-term insurers, brokers and reinsurers. This addresses the third secondary objective. The fourth secondary objective is finally addressed by presentation of the recommended ERMIP.

The data collected through the questionnaire was analysed using Excel spreadsheets and the Statistical Package for the Social Sciences (SPSS), Version 16.

Specifically, section 7.3 discusses the number of respondents who took part in the study in each stratum, explaining how each was selected. The expected number of respondents is compared with the actual number of respondents. Section 7.4 gives a brief overview of the ERMMF as developed by the research, which addressed the primary objective and the first secondary objective. Section 7.5 discusses the findings based on the second secondary objective thereby describing the ERM maturity levels of the insurance industry in each of the eight components. It further highlights the overall maturity level with all the components put together. Responses among the four different strata are then compared (see 7.6) in each component of the ERM in order to address the third research objective. Section 6.5 expands on the ERMIP as required by the fourth secondary objective. Following these sections, the chapter is concluded.

7.2 Number of respondents per strata

The population of the study comprised 9 long-term insurance companies, 11 short-term insurance companies, 3 reinsurance companies and 44 brokerages, which formed a total population of 67 insurance organisations. In terms of the number of insurance organisations, the population was taken as is in conducting the study. Additionally, an average of two risk management personnel was estimated per company, bringing the total population in terms of personnel to 134 (67×2). By using proportionate random sampling, each of the four business types, long-term (life) and short-term (general)

insurance, reinsurance and brokerage was considered as a stratum. A particular number of respondents were chosen from each stratum using the equation suggested by Tabachnik and Fidell (2001:117).

From the equation, the desired numbers of respondents for each class were determined. However, the actual number obtained fell short of the desired number, as shown in Table 7.1. The researcher noted that data was collected during the time when financial year end reports were being compiled by insurance organisations. This was a busy time for them. This left most people with no time to complete the questionnaire. However, as noted earlier (see Section 6.6), the companies tried their best since they were familiar with the researcher for work-related purposes. At the time of the study, the researcher was heading the Department of Risk Management and Insurance at an academic institution. The position involved a fair amount of liaison with the insurance industry, hence the mutual acquaintanceship.

Table 7.1 indicates the classes of enterprises that are in the insurance industry. It further depicts the number of desired respondents per stratum alongside the actual number that responded. The response rate was around 79% for short-term insurance and brokers, and 80% for reinsurance and long-term insurance. This gave an overall response rate of 79%. Table 6.1 depicts the summary of the response rate.

Table 7.1: Response rate

Enterprise	Desired number from strata (sample)	Actual obtained (number of respondents)	Response rate (percentage)
Short-term insurance	19	15	79%
Brokers	75	59	79%
Long-term insurance	15	12	80%
Reinsurance	5	4	80%
Total	114	90	79%

Source: Researcher's own compilation

While the response rate was 79% as calculated using the actual number of responses obtained divided by the predetermined sample, it should be noted that the actual number obtained was 67% of the estimated population (calculated as $90 \div 134 \times 100$). Authors (such as (Bhattacharya, 2010:164; Krishnaswami & Ranganatham, 2009:27) are generally in agreement that small sample studies are more likely to produce unreliable results due to the large amount of uncertainty when estimating population parameters. While there seems to be no clear-cut agreement on the minimum acceptable sample size, authors (such as Krishnaswami & Ranganatham, 2009:28; Appannaiah, et al, 2010:42–43) seem to agree that a sample that is 60% of the population would leave no doubt of credibility of the findings. Such a proportion would provide strong evidence (Malone, Nicholl & Coyne, 2016:21; Vickers, 2003:717). In the light of this, although the desired number of respondents was not obtained, the obtained number which formed 67% of the entire estimated population was deemed cogent for production of credible findings. Figure 7.1 below shows the distribution of respondents between the different strata. The responses from each category were used to meet the second research objectives.

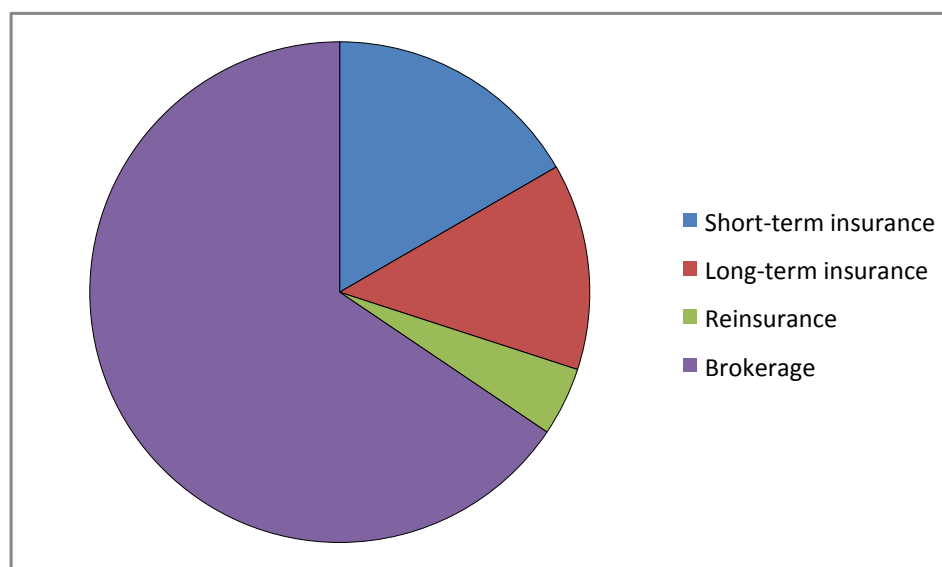


Figure 7.1: Respondents per stratum

Source: Researcher's own compilation

7.3 The enterprise risk management maturity framework (ERMMF)

The ERMMF that was developed during the study and presented in Chapter five was used to evaluate levels of ERM in the insurance industry in Botswana. Table 7.2 displays the ERMMF, while Table 7.3 reflects the interpretation scale. Section 7.5 makes reference to the tables.

Table 7.2: The ERM maturity level measurement framework

Variable/Component	Determinants	Variable maturity level	Overall maturity level
Internal environment	<ul style="list-style-type: none"> Clear policies and ethical standards Commitment to policies that include risk management and ethical behaviour by managers Qualification of management Employee involvement in risk management Clarity of organisational structure 	<ul style="list-style-type: none"> Initial Basic Defined Operational Advanced 	Initial
Objective setting	<ul style="list-style-type: none"> Company mission, strategy and communication of business objectives to the organisation Clarity of key performance indicators Risk tolerance and appetite reflection in objectives Identification of critical success factors in objective achievement Accommodation of stakeholders' interests in risk appetite establishment 	<ul style="list-style-type: none"> Initial Basic Defined Operational Advanced 	
Event/risk identification	<ul style="list-style-type: none"> Adequacy of mechanisms to identify risks Mechanisms to monitor changes in the external environment Involvement of all employees in risk identification Mechanisms to anticipate, identify and respond to routine events that could pose risks. Alertness to compliance issues 	<ul style="list-style-type: none"> Initial Basic Defined Operational Advanced 	Basic
Risk assessment	<ul style="list-style-type: none"> Presence of internal audit function Periodic risk assessments Board of directors overseeing and monitoring risk assessment process Proper expertise used to evaluate and quantify risks Severity and frequency of risks considered when assessing risks 	<ul style="list-style-type: none"> Initial Basic Defined Operational Advanced 	
Risk response	<ul style="list-style-type: none"> Risk appetite and risk tolerance drive risk response Trade-off or risks and rewards considered in handling risks Timely determination of steps to mitigate foreseen risks Regular strengthening of activities that respond to risks Strengthened risk prediction levels 	<ul style="list-style-type: none"> Initial Basic Defined Operational Advanced 	

Table 7.2 (Continued): The ERM maturity level measurement framework

Variable/Component	Determinants	Variable maturity level	Overall maturity level
Control activities	Development and implementation of appropriate policies and procedures for each major process Control activities relate to identified risks and internal controls Periodic review and update of policies and procedures Assets and information protection Relevant committee monitoring of internal controls	Initial Basic Defined Operational Advanced	level
Information and communication	Mechanisms to obtain relevant external information Identification and regular communication of internal information critical to achievement of goals Information available on a timely basis Effective communication of information up, down and across the organisation Mechanisms for open and effective communication with all stakeholders	Initial Basic Defined Operational Advanced	Defined Operational
Monitoring	Monitoring of risk levels in line with the company risk appetite Incorporation of recommendations made by internal and external auditors Existence of a risk function with competent and experienced staff to monitor activities Discussion and review of risks at meetings at different levels Communication of risk control deficiencies to those who must take action	Initial Basic Defined Operational Advanced	Advanced

Source: Researcher's own compilation

Table 7.3 gives a verbal interpretation for each level of maturity. This is meant to assist readers of this dissertation to know what it means for the insurance industry to be at a particular level of ERM maturity.

Table 7.3: Interpretation table

Scale	Mean scale interval	Response	Verbal response
1	1.00–1.49	Initial/lacking	The ERM risk component is not developed. Nothing is in place to show movement in the direction of ERM
2	1.5–2.49	Basic	There are pointers towards the development of ERM systems. Employees not fully involved yet
3	2.5–3.49	Defined	The ERM system is in place. Employees are aware of it. Objectives are to meet both external and internal requirements. However there is no control process to follow up on the implementation
4	3.5–4.49	Operation	There is a complete ERM framework. There is an independent risk management function. There is board-level support of ERM. All senior management is alert to risks in their functions
5	4.5–5.00	Advanced	A holistic approach to risk management exists. Risk management process is ongoing

Source: Researcher's own compilation

7.4 ERM maturity levels of the insurance industry in Botswana

The second secondary objective of this study was to evaluate the ERM maturity levels of the insurance industry in Botswana empirically. The maturity levels were measured using the developed ERMMF. Five criteria were used to determine ERM maturity levels of each variable (component). Table 7.2 represents the ERM maturity level measurement framework, and Table 7.3 shows the measurement scale. This will guide the discussions that follow. Component-wise findings are discussed in each respective section before the overall ERM maturity level of the insurance industry is finally described.

7.4.1 Internal environment

The internal environment of the organisation is expected to determine the implementation of ERM. The results of the internal environment are summarised in Table 7.4 and Figure 7.2

Table 7.4: Internal environment (n = 90)

	Minimum	Maximum	Mean	Std. deviation (SD)
1.1 Employees know about the importance of risk management in the organisation.	2	5	3.12	1.21
1.2 The board of directors has sufficient knowledge, industry expertise, and time to serve effectively.	1	5	3.18	1.19
1.3 The board of directors and audit committee are independent from management.	1	5	3.12	1.22
1.4 Management meetings are held periodically within each function, and senior management attends on a regular basis.	1	5	3.20	1.28
1.5 Issues pertaining to organisational risks are periodically made part of the management meeting agenda.	1	5	2.96	1.18
Average			3.12	1.11

Source: Researcher's own compilation

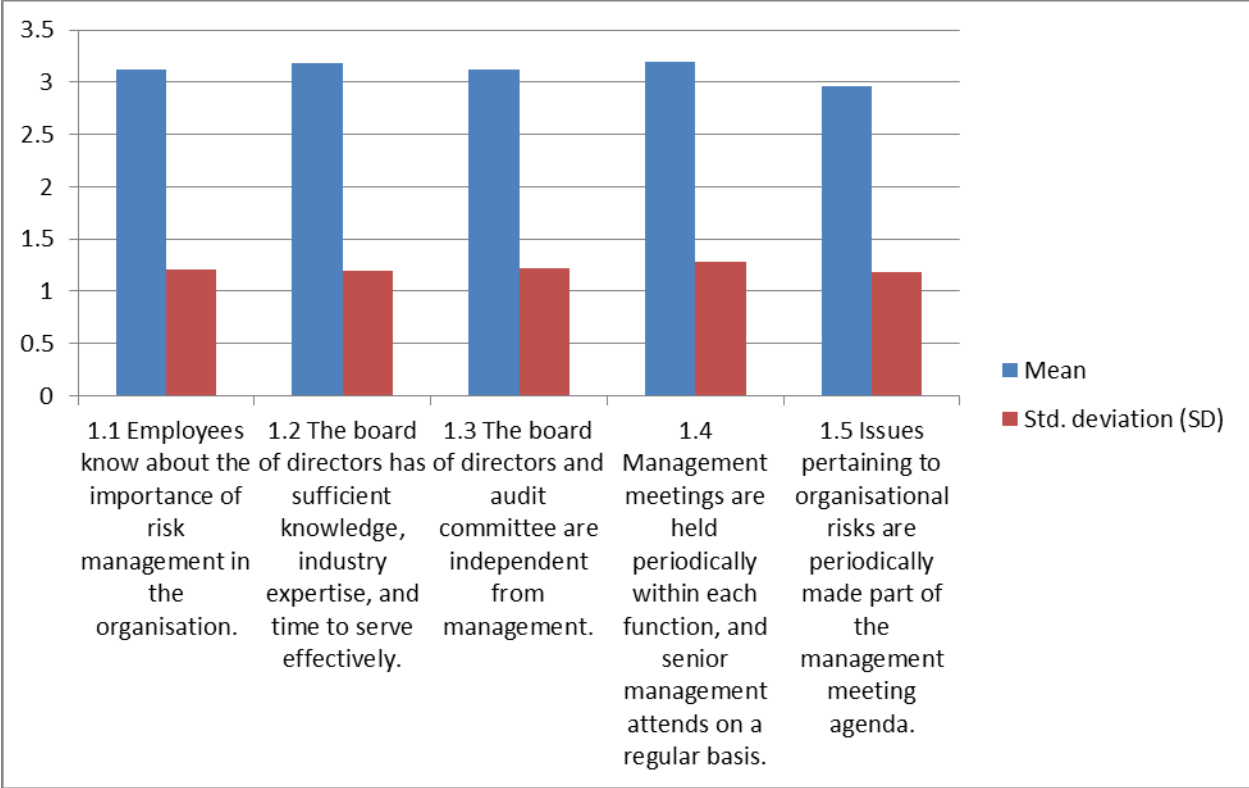


Figure 7.2 Internal environment (n = 90)

Source: Researcher’s own compilation

It can be inferred from Table 7.4 and Figure 7.2 that the internal environment in the insurance industry reflects that, at the time of this research, an ERM system was generally in place. Employees were aware of the risk management discipline and the need to manage risks. While this is a general observation, it can be seen that for all criteria used to measure the ‘internal environment’ variable, the standard deviation (SD) is greater than 1, showing that the responses differed from respondent to respondent. A study conducted by the European Insurance and Occupational Pensions Authority (EIOPA) (2017) suggested that, if the internal environment does not promote a culture of risk management, the rest of the risk management components are not likely to be supported. It is therefore expected that the rest of the components for the Botswana insurance industry will not score beyond the Defined level scored by the internal environment component.

7.4.2 Objective setting

This component enables the organisation to determine its risk appetite and tolerance. Table 6.7 and Figure 6.5 show how each item of the criteria scored. Both the mean score and the SD are shown to give the general overview of the responses and to indicate whether there were differences in responses.

Table 7.5: Objective setting (n = 90)

	Minimum	Maximum	Mean	SD
2.1 Management has established and communicated the company's mission, strategy and business objectives to employees and the board of directors.	2	5	3.22	1.21
2.2 Management establishes and monitors acceptable risk tolerances when setting strategic direction.	2	5	2.93	1.09
2.3 Resources are sufficient to achieve process-level objectives, and if not, plans are in place to acquire the resources.	1	5	2.90	1.07
2.4 Employees participate in establishing process-level objectives and ultimately own business results for which they are responsible.	2	5	2.97	1.03
2.5 Interests of stakeholders are accommodated when establishing risk appetite.	2	5	3.04	1.10
Average			3.01	1.02

Source: Researcher's own compilation

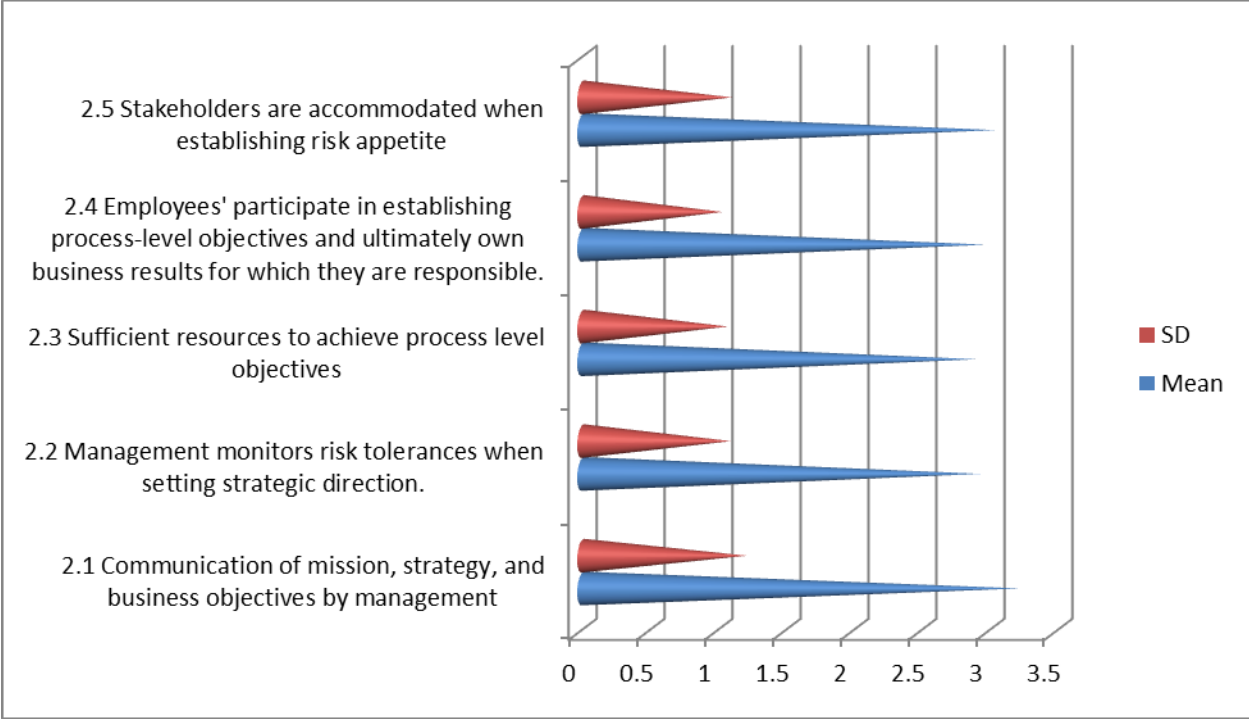


Figure 7.3: Objective setting (n = 90)

Source: Researcher’s own compilation

Findings displayed in Table 7.5 and Figure 7.3 portray that most of the items have a mean of around 3.00. The criteria used had to measure the extent to which the organisation accommodated stakeholder interests, its determination of risk appetite and the participation of all employees in establishing risk management objectives. The overall average of the ‘objective setting’ component of 3.04 indicated that the objectives contained ERM and these have not only been set to meet external requirements but also as an internal risk management measure. There was however, minimal implementation of the activities that led to the achievement of the risk-related objectives. While, according to literature, the insurance industry worldwide has taken risk management seriously in the past three decades (European Insurance and Occupational Pensions Authority) [EIOPA], 2017:24), it would seem that those in Botswana have not fully matured in ERM. The overall SD, which is just over 1, indicates that there were few variations in the responses from different participants.

7.4.3 Event identification

'Event identification' refers to the actual singling out of risks by the organisation. To measure levels of risk identification, the existence of mechanisms to detect and monitor risks were considered alongside the involvement of all employees in the process. Table 6.8 and Figure 6.6 reveal the results of this component by giving the mean and SD of each item as well as the overall mean and SD.

Table 7.6: Event identification (n = 90)

	Minimum	Maximum	Mean	SD
3.1 Adequate mechanisms exist for identifying business risks.	2	5	3.00	1.10
3.2 There is a mechanism for monitoring changes in the economic and regulatory environment.	2	5	3.17	1.14
3.3 All employees are involved in the identification of risks.	1	5	2.90	1.19
3.4 Adequate mechanisms are in place to identify and assess threats of failure to comply with external regulations.	2	5	2.98	1.09
3.5 Formal and/or informal mechanisms exist that anticipate, identify and respond to routine events or activities that could have an effect on achieving company-level or process-level objectives.	2	5	2.96	1.06
Average			3.00	1.01

Source: Researcher's own compilation

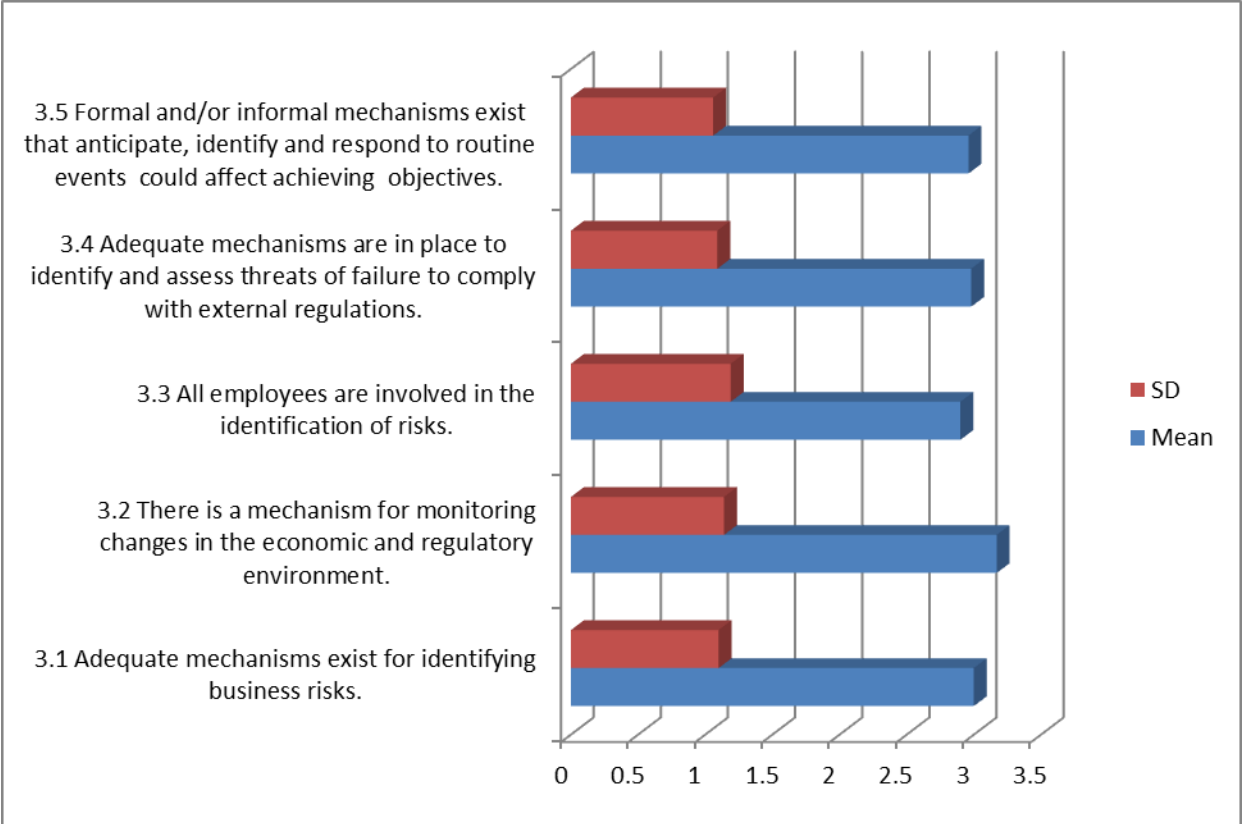


Figure 7.4: Event identification (n = 90)

Source: Researcher’s own compilation

From Table 7.6 and Figure 7.4, it is clear that responses in the ‘event identification’ category differed slightly from one respondent to another as confirmed by the SD, which is just over 1. The mean for each component, which is around 3.00, confirms that mechanisms for risk identification exist but they are not fully functional. This means that, at the time of this research, there was no follow-up to ensure that risks were identified although organisational risks are generally known. This is in agreement with literature that other components of ERM will not exceed the level at which the internal environment is found to be (EIOPA, 2017). The findings in terms of this component share similarities with the findings of the survey carried out by the Ernest and Young (EY) (2013) in Singapore, where respondents indicated that only few identified risks are followed up. ‘Event identification’ is therefore at the Defined level, the level at which internal environment is.

7.4.4 Risk assessment

Risk assessment entails quantification and evaluation of risks while determining their influence and frequency risks (Curtis & Carey, 2012:10). Curtis and Carey (2012) further attest that risk assessment is a highly specialised component requiring the aid of a risk specialist or an actuary. Table 7.7 reflects a summary of the results of the 'risk assessment' component showing the involvement of the organisation management and its board of directors in the assessment of risks.

Table 7.7: Risk assessment (n = 90)

	Minimum	Maximum	Mean	SD
4.1 Periodic (at least annual) risk assessments are performed by internal audit (or other appropriate group).	2	5	3.12	1.17
4.2 The board of directors and/or audit committee oversees and monitors the risk assessment process.	1	5	2.76	1.11
4.3 Management routinely assesses various risks to achieving business objectives.	2	5	3.09	1.05
4.4 Expertise is used to quantify risks that the organisation faces.	2	5	2.77	0.98
4.5 The risk severity and frequency are considered in analysing risks.	2	5	2.96	0.95
Average			2.94	0.94

Source: Researcher's own compilation

It can be seen clearly from Table 7.7 that, according to the findings, the insurance industry has it in their policies, for example, that risks must be assessed regularly and the process must be overseen by the board of directors. Risks must generally be quantified by expertise. In the participating organisations, this was, however, not implemented exactly and no follow-ups were made to ensure these processes were followed through. The survey carried out by the EY (2013) in Singapore indicated that

the insurance industry in Singapore had problems assessing risks due to a lack of expertise and adequate reliable data. A lack of expertise to analyse risks could be a problem in Botswana as well although the study did not address the possible challenges. Responses varied among respondents except in terms of risk quantification and assessing risk frequency and severity as the two criteria have a SD of less than 1.

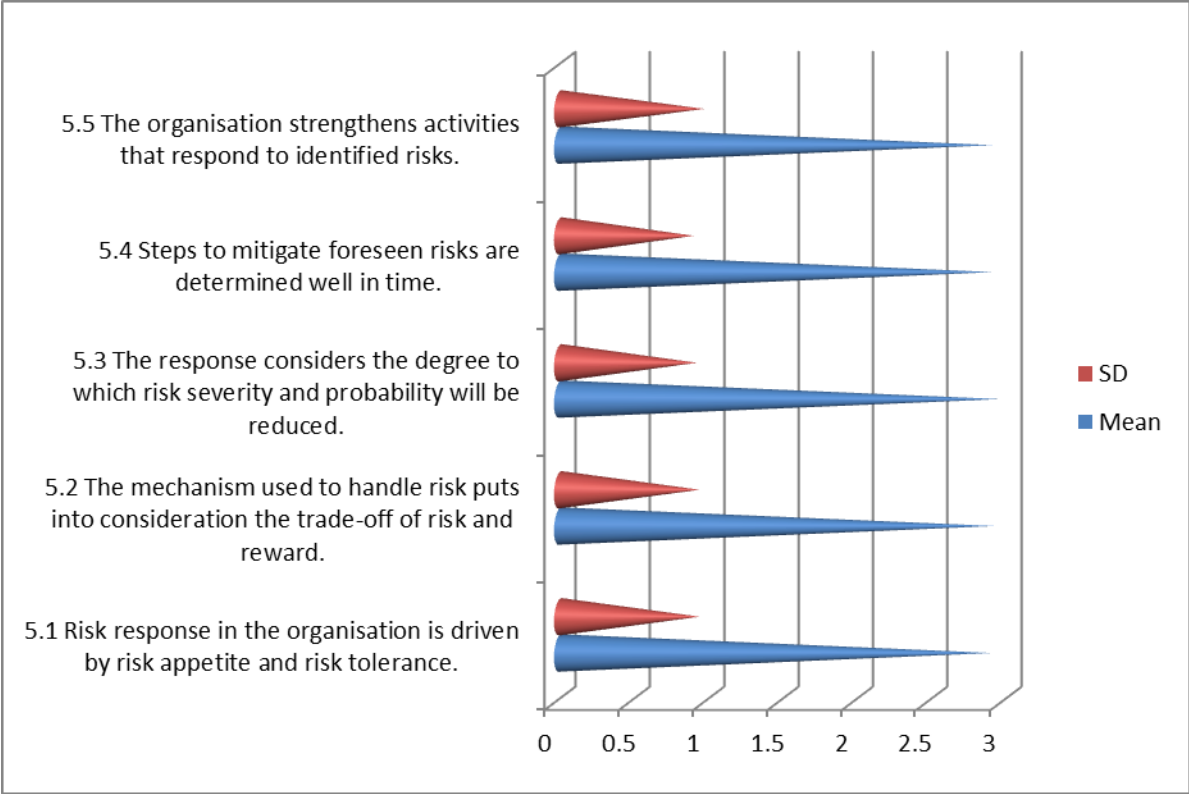
7.4.5 Risk response

Risk response follows after risk assessment and this is a reactive process so that risks are handled accordingly after their assessment. Table 7.8 and Figure 7.5 give the results of the 'risk response' component. The criteria used in this component pointed towards handling risks appropriately, not only guided by the risk assessment but also the organisation's risk appetite.

Table 7.8: Risk response (n = 90)

	Minimum	Maximum	Mean	SD
5.1 Risk response in the organisation is driven by risk appetite and risk tolerance.	2	5	2.90	0.94
5.2 The mechanism used to handle risk puts into consideration the trade-off of risk and reward.	2	5	2.92	0.94
5.3 The response considers the degree to which risk severity and probability will be reduced.	2	5	2.96	0.92
5.4 Steps to mitigate foreseen risks are determined well in time.	2	5	2.91	0.90
5.5 The organisation strengthens activities that respond to identified risks.	2	5	2.91	0.97
Average			2.92	0.88

Source: Researcher's own compilation



Source: Researcher’s own compilation

Figure 7.5: Risk response (n = 90)

From Table 7.8 and Figure 7.5, an observation can be made that the SD of less than 1 for each of the criteria used to determine the level of maturity in the ‘risk response’ component indicates that the responses did not differ much between respondents. The overall average of this component is 2.92, showing that, at the time of this research, the participating organisations in the insurance industry had a predetermined risk appetite and some mechanisms to counter known risks. However, there was generally no proper follow-up to ensure that each organisation operated within its risk appetite.

7.4.6 Internal control

After risk handling measures have been put in place, there is a need for internal control measures to keep risks within acceptable levels. To measure the levels of maturity in this component, the study examined whether the control activities in the policy were

followed and whether they were made part of the appraisal process. The other criterion used was whether internal controls were monitored by the relevant committee. Table 7.9 and Figure 7.6 serve to depict the findings from the 'internal control' component. It shows the overall mean and SD as well as the same for each component.

Table 7.9: Internal control (n = 90)

	Minimum	Maximum	Mean	SD
6.1 Appropriate policies and procedures have been developed and implemented for each major process.	2	5	2.90	0.93
6.2 Appropriate and timely actions are taken on exceptions to policies and procedures.	2	5	2.99	0.97
6.3 The audit committee (or other relevant committee) monitors internal controls.	2	5	2.92	0.97
6.4 Performance appraisals adequately address internal control responsibilities and set forth criteria for integrity and ethical behaviour.	2	5	2.76	0.96
6.5 Control activities described in policy and procedure manuals relate clearly to identified risks and internal controls.	2	5	3.02	0.98
Average			2.92	0.90

Source: Researcher's own compilation

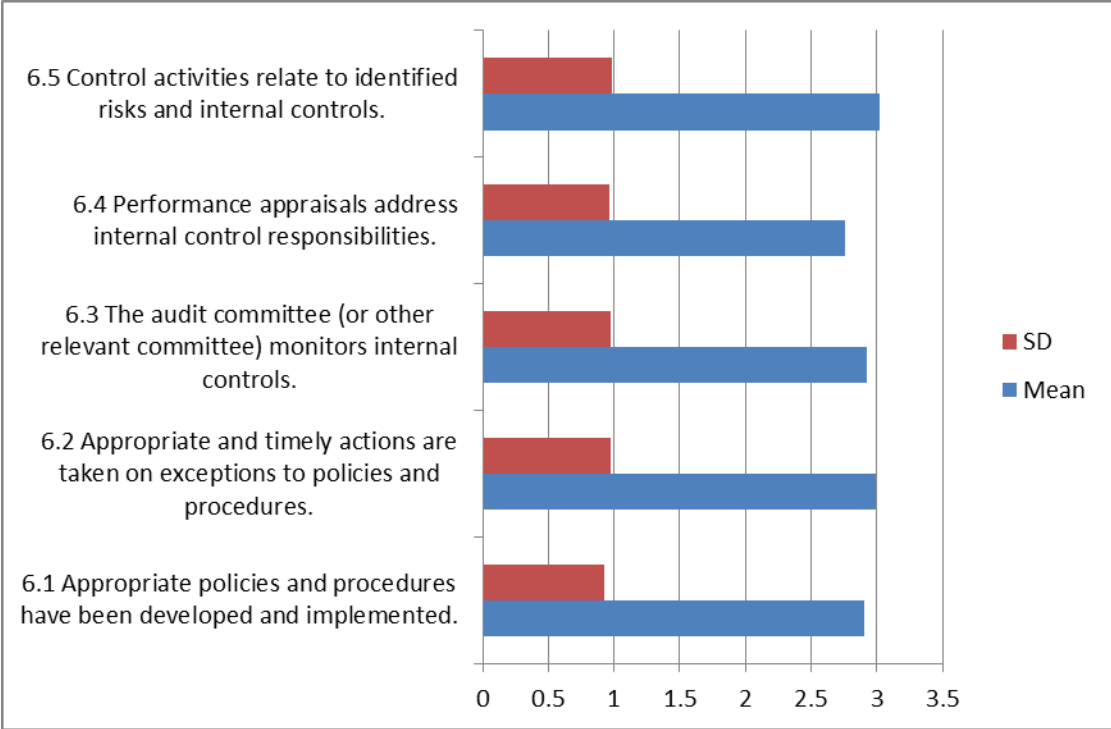


Figure 7.6: Internal control (n = 90)

Source: Researcher’s own compilation

From Table 7.9 and Figure 7.6, it is observed that the participating organisations in the insurance industry in Botswana generally had policies regarding internal controls. These control measures are meant to address risks with which each organisation is faced. However, no fully developed mechanism to ensure that the control measures are followed, was reported. The overall average for this component is 2.91. The SD of less than 1 shows that the responses were generally homogenous for all respondents. There is general agreement with findings from the literature review, which asserted that insurance companies in the world have taken it upon themselves to improve the internal control environment (EIOPA, 2017). Literature however did not specify to what extent the insurance industry has pursued this as it is likely to differ from country to country. EIOPA (2017) further suggests that if internal controls are not properly implemented, the rest of the risk management process is deemed weak. This possibly explains why the rest of the ERM components are at the Defined level of maturity just like the internal control component.

7.4.7 Information and communication

ERM requires that an organisation should have proper organisational structures that enable the reliable free flow of information. This will enhance two-way communication of risks vertically (from one management level to the other) and laterally (among departments and employees at the same hierarchical level in the organisation).

Table 7.10 and Figure 7.7 portray a summary of findings on the 'information and communication' component. Timeliness of the information and its relevance were gauged in each organisation. The findings are summarised in terms of the mean and SD.

Table 7.10: Information and communication (n = 90)

	Minimum	Maximum	Mean	SD
7.1 Internally generated information critical to achievement of the objectives of the company, including those relative to critical success factors, is identified and regularly reported.	2	5	2.92	1.00
7.2 Information is available on a timely basis to allow effective monitoring of events and activities, internal and external, and prompt reaction to economic and business factors and control issues.	2	5	3.00	0.98
7.3 Information is communicated effectively up, down and across the organisation.	2	5	2.82	0.93
7.4 All reported potential improprieties are reviewed, investigated and resolved in a timely manner.	2	5	2.93	0.88
7.5 Mechanisms exist for open and effective communication with customers, suppliers and other external parties regarding information on changing customer needs.	2	5	3.00	1.02
Average			2.94	0.90

Source: Researcher's own compilation

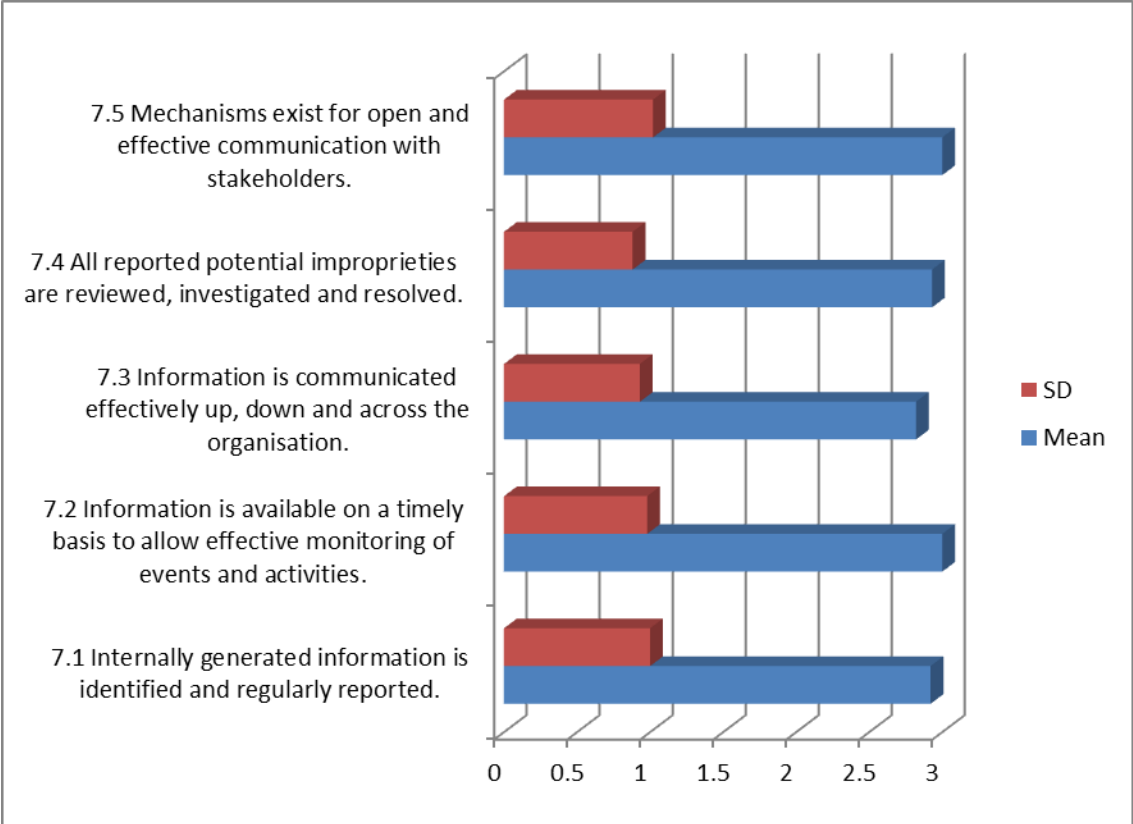


Figure 7.7: Information and communication (n = 90)

Source: Researcher’s own compilation

It can be perceived from Table 7.10 and Figure 7.7 that the insurance industry organisations generally have set communication structures and there is promotion of open communication. However, in practice this is not what is happening. The study found that there seemed to be a likelihood of haphazard communication that is not according to set structures. At the time of the study, there was probably no free flow of information internally and externally. As a result, there was probably also no proper communication of impending risks to relevant personnel. Responses were generally homogeneous when it came to the ‘information and communication’ component as the SD is 1 and below for all the criteria used.

7.4.8 Monitoring

As ERM is a continuous process, there is a need for organisations to monitor their activities to ensure that all risks are kept in check. This component was assessed using the involvement of company management and other functional leaders in monitoring risks to ensure they are always within the risk appetite of the organisation.

Table 6.13 and Figure 6.10 reflect a summary of the results by indicating the mean for responses in each criterion, the SD for each and the overall mean and SD.

Table 7.11: Monitoring (n = 90)

	Minimum	Maximum	Mean	SD
8.1 Risk levels are monitored in line with the risk appetite of the company.	2	5	2.93	0.909
8.2 Personnel responsible for reports are required to sign off on their accuracy and integrity, and are held accountable if deficiencies are found.	2	5	2.92	0.997
8.3 Management implements internal control recommendations made by internal and external auditors and corrects known deficiencies on a timely basis.	1	5	2.78	0.992
8.4 A risk function with competent and experienced staff exists to assist in monitoring activities.	1	5	2.73	0.909
8.5 The internal audit function has access to the board of directors or audit committee.	1	5	2.56	0.937
Average			2.78	0.85

Source: Researcher's own compilation

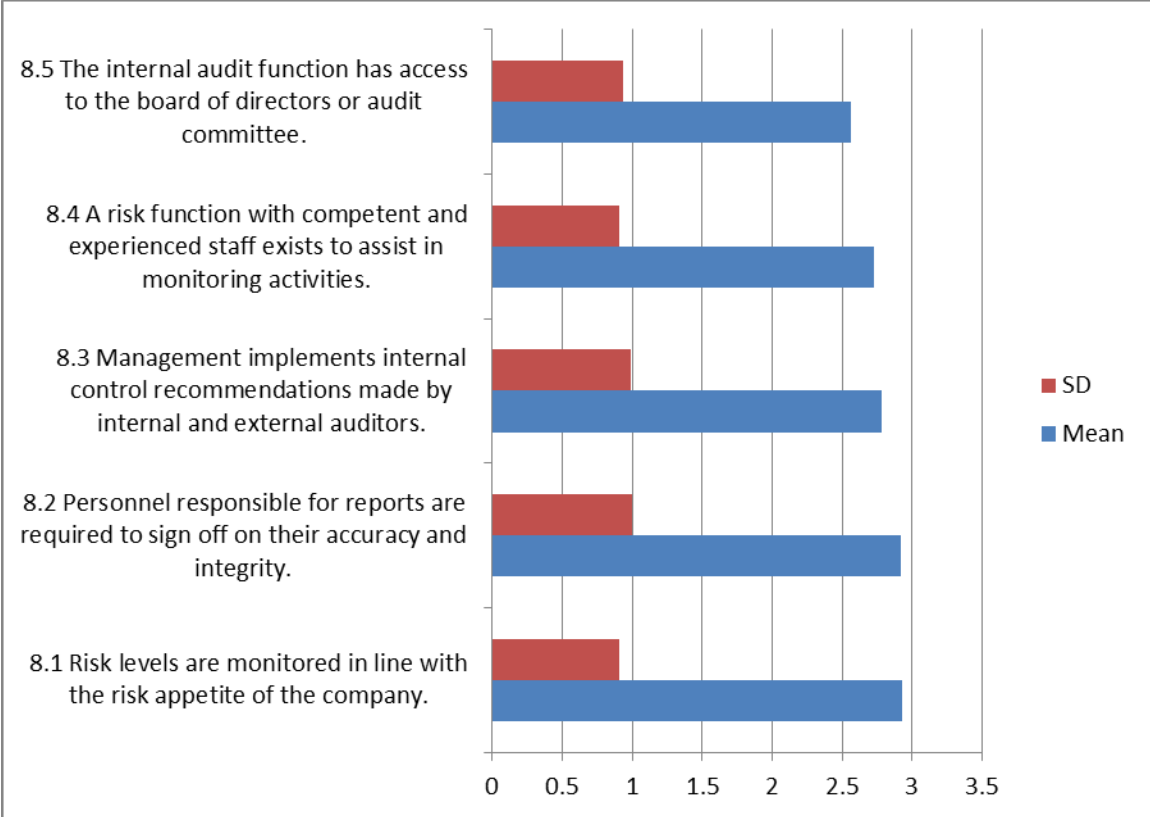


Figure 7.8: Monitoring (n = 90)

Source: Researcher’s own compilation

The overall SD of the ‘monitoring’ component of 0.85 indicates the homogeneity of the responses in this category. The responses generally indicated that it is known within the industry that risk management and control measures must be monitored. From the responses, it seemed that this is however, not fully implemented. There was also a possibility that, at the time of this research, most organisations did not have an internal audit function, as item 8.5 on internal audit seems to have scored the lowest (2.56).

On the overall, according to the findings, the insurance industry in Botswana was aware of ERM and had made attempts to implement it at the time of this research. Organisations have ensured that employees are aware of ERM. Objectives have been set to meet both external and internal requirements. However, minimum implementation and follow-up of ERM were in place. The overall results have also confirmed that the rest of the ERM components were not likely to score above the ‘internal environment’

component. This was clear from the fact that all the insurance companies that were part of the study scored around 3.00 following the same score obtained for the 'internal environment' component.

7.5 Comparison of responses among different strata

Secondary research objective 2 was to compare responses between different strata. The comparison comprised each of the eight components as well as in general. The developed ERMMF was utilised to address this objective. A one-way ANOVA was conducted to evaluate whether there were differences between the four strata: short-term insurance, life insurance, reinsurance and brokerage. Table 6.14 shows a summary of the one-way ANOVA analysis which tested whether there were differences between the different strata in each of the eight ERM components.

Table 7.12: Summary of one-way ANOVA analysis

		Sum of squares	Df	Mean square	F	Sig.
Internal environment	Between groups	39.075	3	13.025	15.705	0.000
	Within groups	71.324	86	0.829		
	Total	110.398	89			
Objective Setting	Between groups	25.988	3	8.663	11.127	0.000
	Within groups	66.956	86	0.779		
	Total	92.944	89			
Event identification	Between groups	24.737	3	8.246	10.644	0.000
	Within groups	66.623	86	0.775		
	Total	91.360	89			

Table 7.12 (Continued): Summary of one-way ANOVA analysis

		Sum of squares	Df	Mean square	F	Sig.
Risk assessment	Between groups	42.394	3	14.131	32.973	0.000
	Within groups	36.857	86	0.429		
	Total	79.252	89			
Control Activities	Between groups	28.986	3	9.662	19.394	0.000
	Within groups	42.845	86	0.498		
	Total	71.832	89			
Risk response	Between groups	28.004	3	9.335	19.920	0.000
	Within groups	40.300	86	0.469		
	Total	68.304	89			
Information & communication	Between groups	31.779	3	10.593	23.023	0.000
	Within groups	39.568	86	0.460		
	Total	71.346	89			
Monitoring	Between groups	39.487	3	13.162	46.294	0.000
	Within groups	24.451	86	0.284		
	Total	63.938	89			

Source: Researcher's own compilation

In Table 7.12, it is clear that there are significant differences in internal environment, objective setting, event identification, risk assessment, control activities, risk response, information and communication and monitoring with $F(3.86) = 15.705$, $p = 0.00$, $F(3.86) = 11.127$, $p = 0.00$, $F(3.86) = 10.644$, $p = 0.00$, $F(3.86) = 32.973$, $p = 0.00$, $F(3.86) = 19.394$, $p = 0.00$, $F(3.86) = 19.920$, $p = 0.00$, $F(3.86) = 23.023$, $p = 0.00$, and $F(3.86) = 46.294$, $p = 0.00$, respectively. A Tukey post hoc analysis was then done to find which pairs were different. The mean difference was considered significant at the 0.05 level. Tables 7.13–7.20 show a summary of the results after conducting a further test to determine where the actual differences in responses lay. The tables indicate the type of business the organisation is in, the mean difference, standard error as well as the level of significance.

Table 7.13 indicates whether responses from different types of businesses varied significantly. The results show that, when it came to the internal environment, component responses from brokerages differed from the responses from the short-term insurers and long-term insurers. This implies that even though the insurance industry overall was at a defined stage in terms of the internal environment, responses per criterion were varying.

Table 7.13: Comparison of responses in internal environment

(I) A.1 What business is the organisation in?	(J) A.1 What business is the organisation in?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
General Insurance	Brokerage	1.20565	.26334	.000	.5157	1.8956
	Long term	-.48333	.35271	.521	-1.4074	.4408
	Reinsurance	.56667	.51247	.687	-.7760	1.9093
Brokerage	General Insurance	-1.20565	.26334	.000	-1.8956	-.5157
	Long term	-1.68898	.28839	.000	-2.4446	-.9334
	Reinsurance	-.63898	.47052	.529	-1.8717	.5938
Long term	General Insurance	.48333	.35271	.521	-.4408	1.4074
	Brokerage	1.68898	.28839	.000	.9334	2.4446
	Reinsurance	1.05000	.52578	.197	-.3275	2.4275
Reinsurance	General Insurance	-.56667	.51247	.687	-1.9093	.7760
	Brokerage	.63898	.47052	.529	-.5938	1.8717
	Long term	-1.05000	.52578	.197	-2.4275	.3275

*. The mean difference is significant at the 0.05 level.

Source: Researcher's own compilation

From the results provided in Table 7.14, it appears that the responses on the 'objective setting' component differed between long-term insurers and short-term insurers as well as between long-term insurers and brokerages.

Table 7.14: Comparison of responses in ‘objective setting’

(I) A.1 What business is the organisation in?		(J) A.1 What business is the organisation in?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
General Insurance	Brokerage		.45853	.25515	.282	-.2099	1.1270
	Long term		-1.08667*	.34174	.011	-1.9820	-.1913
	Reinsurance		-.50333	.49653	.742	-1.8042	.7976
Brokerage	General Insurance		-.45853	.25515	.282	-1.1270	.2099
	Long term		-1.54520*	.27942	.000	-2.2773	-.8131
	Reinsurance		-.96186	.45589	.158	-2.1563	.2326
Long term	General Insurance		1.08667*	.34174	.011	.1913	1.9820
	Brokerage		1.54520*	.27942	.000	.8131	2.2773
	Reinsurance		.58333	.50943	.663	-.7514	1.9180
Reinsurance	General Insurance		.50333	.49653	.742	-.7976	1.8042
	Brokerage		.96186	.45589	.158	-.2326	2.1563
	Long term		-.58333	.50943	.663	-1.9180	.7514

*. The mean difference is significant at the 0.05 level.

Source: Researcher’s own compilation

Table 7.15, which summarises the comparison of responses in the ‘event identification’ component, indicates that brokerages differed in their responses from long-term insurers and general insurers.

Table 7.15: Comparison of responses in ‘event identification’

(I) A.1 What business is the organisation in?	(J) A.1 What business is the organisation in?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
General Insurance	Brokerage	.87932*	.25451	.005	.2125	1.5461
	Long term	-.51333	.34089	.438	-1.4064	.3798
	Reinsurance	.27000	.49530	.948	-1.0277	1.5677
Brokerage	General Insurance	-.87932*	.25451	.005	-1.5461	-.2125
	Long term	-1.39266*	.27872	.000	-2.1229	-.6624
	Reinsurance	-.60932	.45475	.540	-1.8008	.5821
Long term	General Insurance	.51333	.34089	.438	-.3798	1.4064
	Brokerage	1.39266*	.27872	.000	.6624	2.1229
	Reinsurance	.78333	.50816	.418	-.5480	2.1147
Reinsurance	General Insurance	-.27000	.49530	.948	-1.5677	1.0277
	Brokerage	.60932	.45475	.540	-.5821	1.8008
	Long term	-.78333	.50816	.418	-2.1147	.5480

*. The mean difference is significant at the 0.05 level.

Source: Researcher’s own compilation

It appears that responses on ‘risk assessment’, like those on ‘event identification’, differed between the brokers and long-term insurers as well as between brokers and short-term insurers, as represented in Table 7.16.

Table 7.16: Comparison of responses in ‘risk assessment’

(I) A.1 What business is the organisation in?	(J) A.1 What business is the organisation in?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
General Insurance	Brokerage	.68497*	.18930	.003	.1890	1.1809
	Long term	-1.11333*	.25355	.000	-1.7776	-.4490
	Reinsurance	-1.16333*	.36839	.012	-2.1285	-.1981
Brokerage	General Insurance	-.68497*	.18930	.003	-1.1809	-.1890
	Long term	-1.79831*	.20731	.000	-2.3415	-1.2552
	Reinsurance	-1.84831*	.33824	.000	-2.7345	-.9621
Long term	General Insurance	1.11333*	.25355	.000	.4490	1.7776
	Brokerage	1.79831*	.20731	.000	1.2552	2.3415
	Reinsurance	-.05000	.37796	.999	-1.0403	.9403
Reinsurance	General Insurance	1.16333*	.36839	.012	.1981	2.1285
	Brokerage	1.84831*	.33824	.000	.9621	2.7345
	Long term	.05000	.37796	.999	-.9403	1.0403

*. The mean difference is significant at the 0.05 level.

Source: Researcher’s own compilation

Table 7.17 shows that the responses in the ‘risk response’ component as in ‘event identification’ and ‘risk assessment’, differed between the broker and the general insurer, and the broker and long-term insurer.

Table 7.17: Comparison of responses in ‘risk response’

(I) A.1 What business is the organisation in?	(J) A.1 What business is the organisation in?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
General Insurance	Brokerage	.37356	.20410	.266	-.1612	.9083
	Long term	-1.09000*	.27337	.001	-1.8062	-.3738
	Reinsurance	-1.29000*	.39719	.009	-2.3306	-.2494
Brokerage	General Insurance	-.37356	.20410	.266	-.9083	.1612
	Long term	-1.46356*	.22352	.000	-2.0492	-.8779
	Reinsurance	-1.66356*	.36468	.000	-2.6190	-.7081
Long term	General Insurance	1.09000*	.27337	.001	.3738	1.8062
	Brokerage	1.46356*	.22352	.000	.8779	2.0492
	Reinsurance	-.20000	.40751	.961	-1.2677	.8677
Reinsurance	General Insurance	1.29000*	.39719	.009	.2494	2.3306
	Brokerage	1.66356*	.36468	.000	.7081	2.6190
	Long term	.20000	.40751	.961	-.8677	1.2677

*. The mean difference is significant at the 0.05 level.

Source: Researcher’s own compilation

Responses in the ‘control activities’ component differed among different business activities as shown in Table 7.18. Reinsurance was the only business activities whose responses did not seem to have differed significantly from any of the other business types. Table 7.18 shows the comparison of responses in ‘control activities’.

Table 7.18: Comparison of responses in ‘control activities’

(I) A.1 What business is the organisation in?	(J) A.1 What business is the organisation in?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
General Insurance	Brokerage	.89763*	.19795	.000	.3790	1.4162
	Long term	-.61000	.26512	.106	-1.3046	.0846
	Reinsurance	.29000	.38522	.875	-.7193	1.2993
Brokerage	General Insurance	-.89763*	.19795	.000	-1.4162	-.3790
	Long term	-1.50763*	.21678	.000	-2.0756	-.9397
	Reinsurance	-.60763	.35369	.321	-1.5343	.3190
Long term	General Insurance	.61000	.26512	.106	-.0846	1.3046
	Brokerage	1.50763*	.21678	.000	.9397	2.0756
	Reinsurance	.90000	.39522	.111	-.1355	1.9355
Reinsurance	General Insurance	-.29000	.38522	.875	-1.2993	.7193
	Brokerage	.60763	.35369	.321	-.3190	1.5343
	Long term	-.90000	.39522	.111	-1.9355	.1355

*. The mean difference is significant at the 0.05 level.

Source: Researcher’s own compilation

As per Table 7.19, brokerages seem to have differed in their responses between long-term insurers and short-term insurers in the ‘information and communication’ component. This follows the trend in most of the components.

Table 7.19: Comparison of responses in ‘information and communication’

(I) A.1 What business is the organisation in?	(J) A.1 What business is the organisation in?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
General Insurance	Brokerage	.87119*	.19614	.000	.3573	1.3851
	Long term	-.71667*	.26270	.038	-1.4049	-.0284
	Reinsurance	-.25000	.38170	.914	-1.2500	.7500
Brokerage	General Insurance	-.87119*	.19614	.000	-1.3851	-.3573
	Long term	-1.58785*	.21480	.000	-2.1506	-1.0251
	Reinsurance	-1.12119*	.35046	.010	-2.0394	-.2030
Long term	General Insurance	.71667*	.26270	.038	.0284	1.4049
	Brokerage	1.58785*	.21480	.000	1.0251	2.1506
	Reinsurance	.46667	.39162	.634	-.5594	1.4927
Reinsurance	General Insurance	.25000	.38170	.914	-.7500	1.2500
	Brokerage	1.12119*	.35046	.010	.2030	2.0394
	Long term	-.46667	.39162	.634	-1.4927	.5594

*. The mean difference is significant at the 0.05 level.

Source: Researcher’s own compilation

Responses in the ‘monitoring’ component differed between different business activities just as they did in the ‘control activities’ component, as shown in Table 7.20. Reinsurance is the only business activities whose responses did not seem to have differed significantly from any of the other business types.

Table 7.20: Comparison of responses in ‘monitoring’

(I) A.1 What business is the organisation in?	(J) A.1 What business is the organisation in?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
General Insurance	Brokerage	.46011*	.15419	.019	.0561	.8641
	Long term	-1.31333*	.20651	.000	-1.8544	-.7723
	Reinsurance	-1.29667*	.30006	.000	-2.0828	-.5105
Brokerage	General Insurance	-.46011*	.15419	.019	-.8641	-.0561
	Long term	-1.77345*	.16886	.000	-2.2158	-1.3310
	Reinsurance	-1.75678*	.27550	.000	-2.4786	-1.0350
Long term	General Insurance	1.31333*	.20651	.000	.7723	1.8544
	Brokerage	1.77345*	.16886	.000	1.3310	2.2158
	Reinsurance	.01667	.30785	1.000	-.7899	.8232
Reinsurance	General Insurance	1.29667*	.30006	.000	.5105	2.0828
	Brokerage	1.75678*	.27550	.000	1.0350	2.4786
	Long term	-.01667	.30785	1.000	-.8232	.7899

*. The mean difference is significant at the 0.05 level.

Source: Researcher’s own compilation

The findings from the analysis are further summarised in Table 7.21 for ease of interpretation. Table 7.21 simplifies the findings that were summarised in Tables 7.13–20. The first column shows the ERM components that were used to assess the levels of ERM maturity for organisations. The second column shows the pairs of strata (enterprises) with differing responses.

Table 7.21: Summary of comparison of strata findings

Component	Strata with differing responses
Internal environment	Short-term insurance and brokerage Brokerage and long-term insurance
Objective setting	Short-term insurance and long-term insurance Brokerage and long-term insurance
Event identification	Short-term insurance and brokerage Brokerage and long-term insurance
Risk assessment	Short-term insurance and brokerage Brokerage and long-term insurance Short-term insurance and long-term insurance
Risk response	Short-term insurance and brokerage Brokerage and long-term insurance
Control activities	Short-term insurance and brokerage Brokerage and long-term insurance Short-term insurance and long-term insurance
Information and communication	Short-term insurance and brokerage Brokerage and long-term insurance
Monitoring	Short-term insurance and brokerage Brokerage and long-term insurance Short-term insurance and long-term insurance

Source: Researcher's own compilation

Table 7.21 indicates that short-term insurance and brokerage seemed to have differed in their responses in all components. This explains cases where the SD was above 1. Similarly, long-term insurance and brokerage responses seemed to be different in all components at the 5% level of significance. When it came to the 'risk assessment', 'control activities' and 'monitoring' components, only responses from the long-term and reinsurance categories did not differ; the rest differed. It can thus be concluded that responses among most strata differed from component to component.

7.6 Proposed ERM implementation procedure (ERMIP) for the insurance industry in Botswana

The following ERMIP plainly gives practical steps that could be taken by an insurance organisation to implement ERM. The section describes the proposed procedure for the implementation of ERM in the insurance industry in Botswana. The thesis used the COSO ERM framework as a guideline.

7.6.1 Internal environment

The organisation needs to create a risk atmosphere which will then cultivate the risk culture within the organisation (Louisot & Ketcham, 2014:7). This requires total acceptance and agreement of the top management and the board of directors as risk management would have to appear in the policies and procedures (Moeller, 2011:5). The researcher therefore recommends that there be a risk specialist who, with the support of management, will spearhead the ERMIP in each organisation.

An initial meeting with functional leaders is necessary in promoting the risk culture in the organisation. These will then cascade the idea to the rest of their departments, and thus eventually get all employees involved. Meetings could have a regular common feature of 'risk management' as an item on the agenda. Workshops could also be conducted to be attended by all employees. Figure 7.9 gives a diagrammatic presentation of the creation of an internal environment in the organisation.

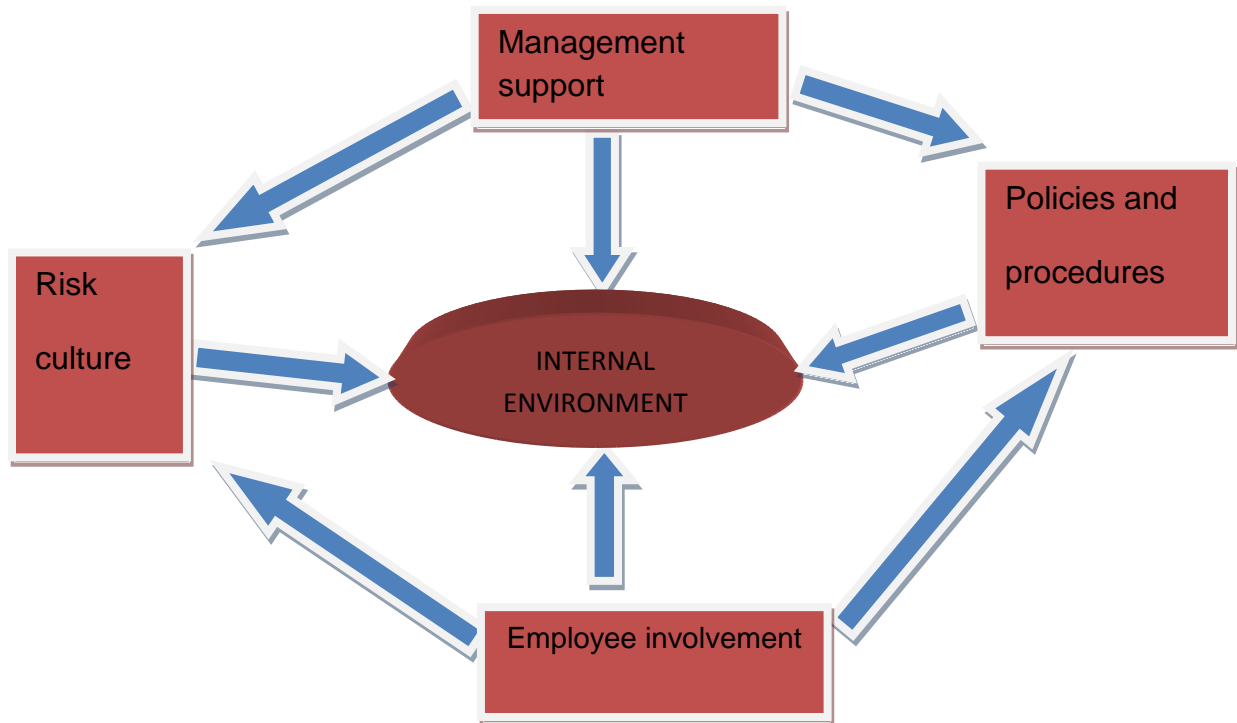


Figure 7.9: Internal environment

Source: Researcher's own compilation

7.6.2 Objective setting

When formulating or reviewing the strategy of the organisation it is necessary that objectives spell out the company's risk appetite and tolerance (Moeller, 2011:43). This is so that all other departmental objectives fall within the limits set at strategic levels. Within the strategic objectives, the critical success factors must be indicated, which would guide the channelling of resources towards such areas. The risks taken would be to achieve things that help achieve major goals. Objectives set at strategic level must be communicated down to all employees to guide all operations and processes. The organisation needs to accommodate stakeholder interests in determining the risk appetite (Graham, 2015:35). Stakeholders are, inter alia, the management, investors, banks, brokers and the regulator. Figure 7.10 summarises the objective-setting process, showing how each activity contributes to objective setting as a component of ERM.

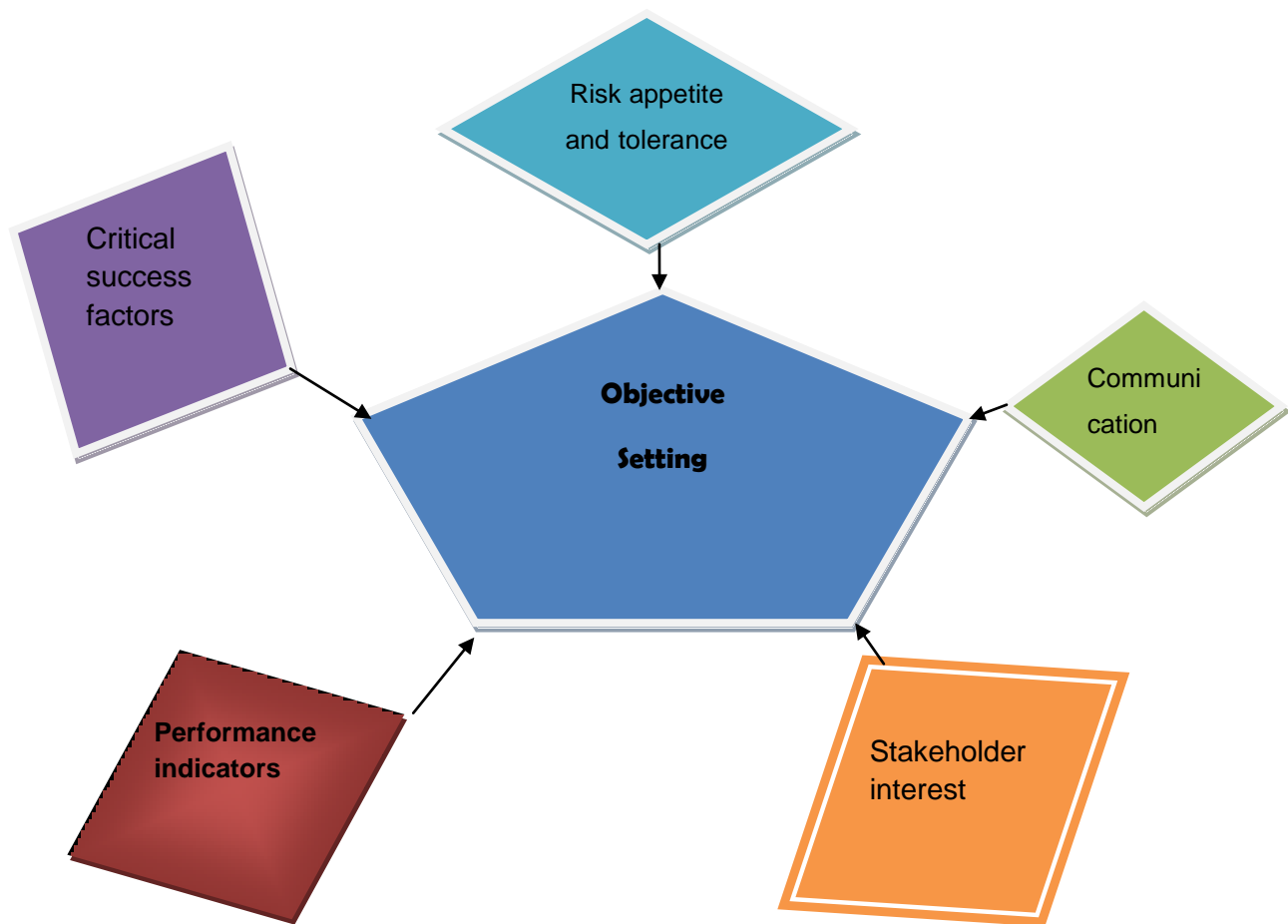


Figure 7.10: Objective setting

Source: Researcher's own compilation

Stakeholders' interests in the organisation differ from one stakeholder group to another. The supervisors confine themselves to the survival of the company over one year. The management of a company is concerned about which line of business to develop (Graham, 2015:35). The company's shareholders' standpoint is the consideration of the value-at-risk: for them, bankruptcy must be avoided to limit their own losses and there is no value left beyond bankruptcy (Louisot & Ketcham, 2014:26). On the other hand, for the policyholders, what counts is knowing the chances that they will recover their money. Figure 7.11 depicts the stakeholders' expectations.

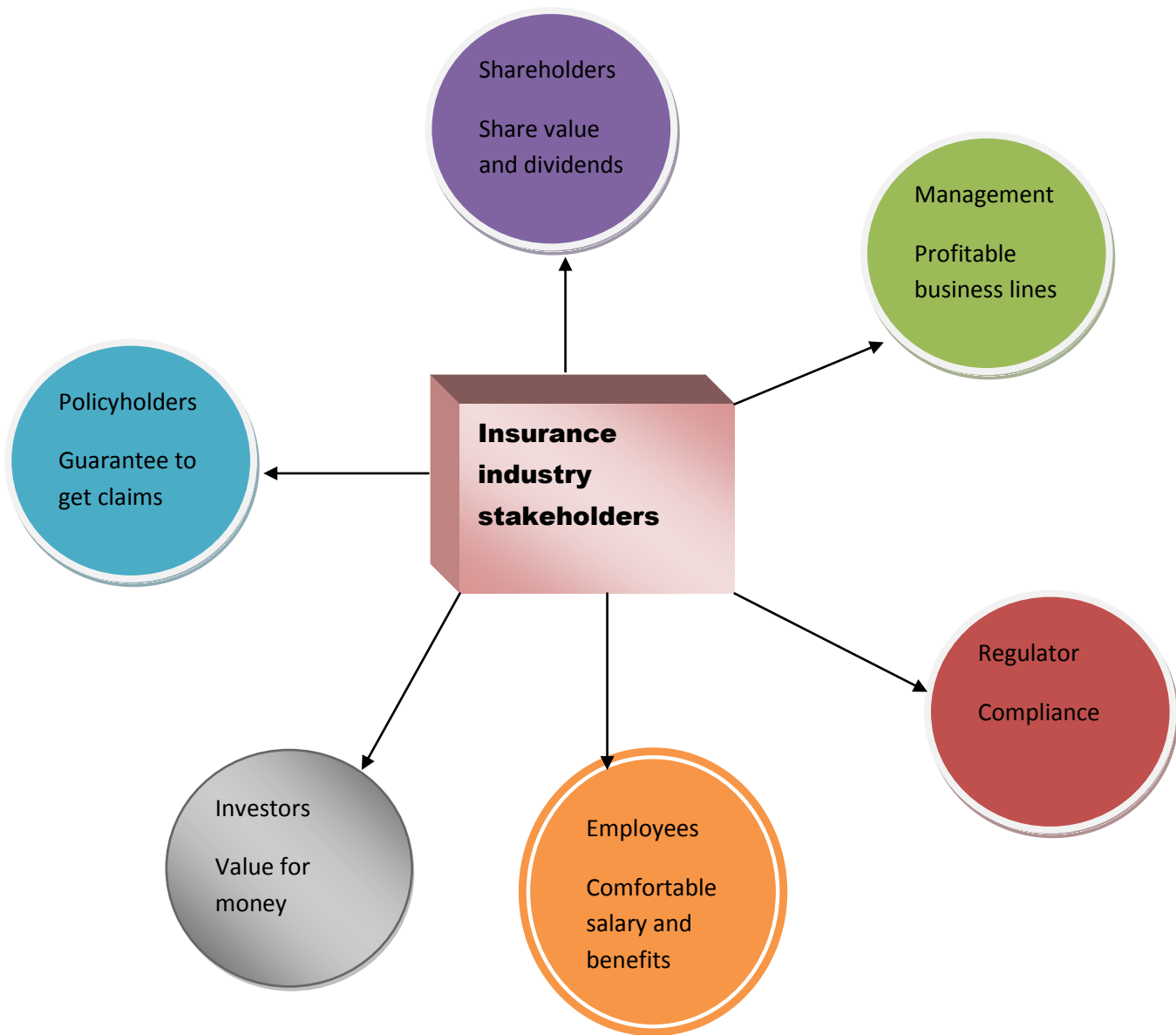


Figure 7.11: Stakeholders' interests

Source: Researcher's own compilation

An organisation might therefore consider a consultation meeting with all its stakeholders in the formulation of strategic options that are inculcated with risk management.

7.6.3 Event identification

When the right internal environment exists and objectives accommodating risk management have been set, the organisation needs to identify risk-bearing events and individual risks associated with the events (Louisot & Ketcham, 2014:37). Proper mechanisms should be put in place to detect changes in the external environment and internal events that may present risks to the organisation. A risk ownership register (see Moeller, 2011)) could be created showing all risks and the personnel in managerial positions responsible for them. This is to ensure all risks are accounted for. Risks could be identified through formal meetings at management and lower levels, brainstorming and conducting regular risk review meetings.

7.6.4 Risk assessment

Once risks have been identified there is a need to assess them in terms of their severity (effect) and frequency. This is to inform the next stage, which is risk response. Figure 7.12 shows the risk assessment process.

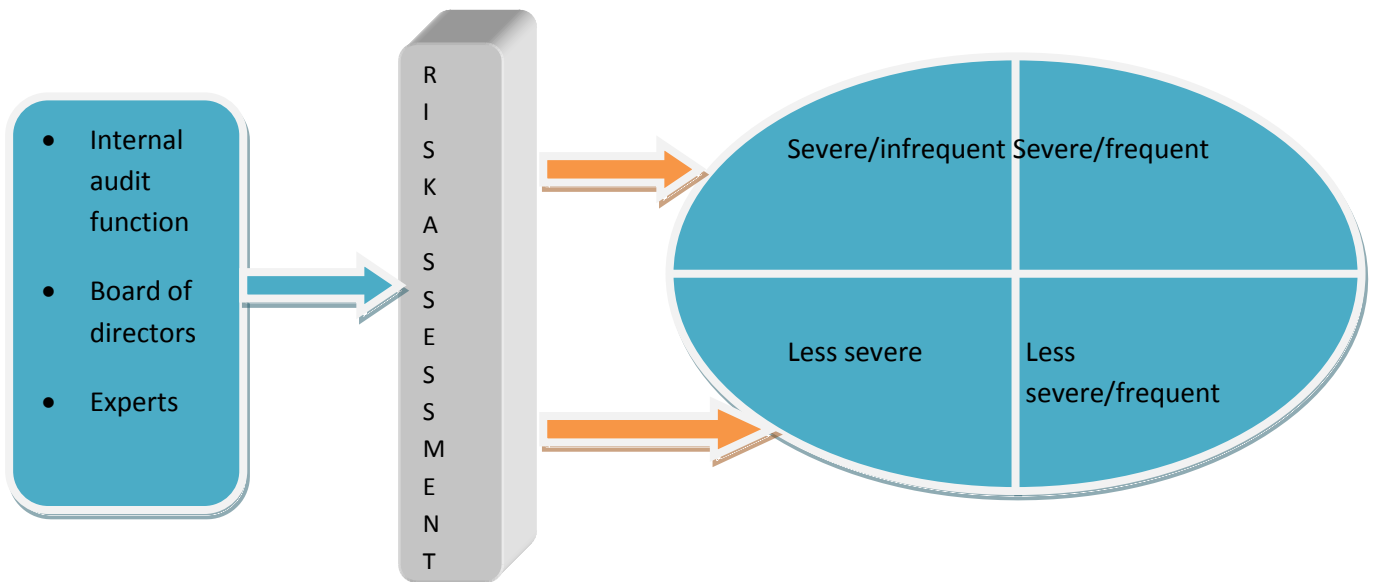


Figure 7.12: Risk assessment

Source: Researcher's own compilation

7.6.5 Risk response

After proper risk assessment, the organisation is in a position to settle its risk-handling strategies. These will depend on the nature of risks, that is, the effect and severity of each risk. The risk response chosen for each risk has to be within the risk appetite of the organisation and must take into consideration the risk trade-off with the return (Graham, 2015:52). This stage involves top management and they may engage the appropriate expertise where necessary. The person holding the highest risk management position is expected to champion this activity. It has to be a regularly timed stage, which is rather proactive and not reactive. Possible risk response strategies are avoiding, reducing, sharing and accepting (Curtis & Carey, 2012:9).

7.6.6 Control activities

Control activities cannot be treated as a stage per se as they are interrelated with the stages discussed above. Having control activities in place is a continuous process. Relevant committees must be set up to monitor the internal controls of the organisation to ensure that risks are monitored (Graham, 2015:52). Procedures and policies, which are subject to review, must be put in place. Figure 7.13 shows the elements that drive the internal control activities.

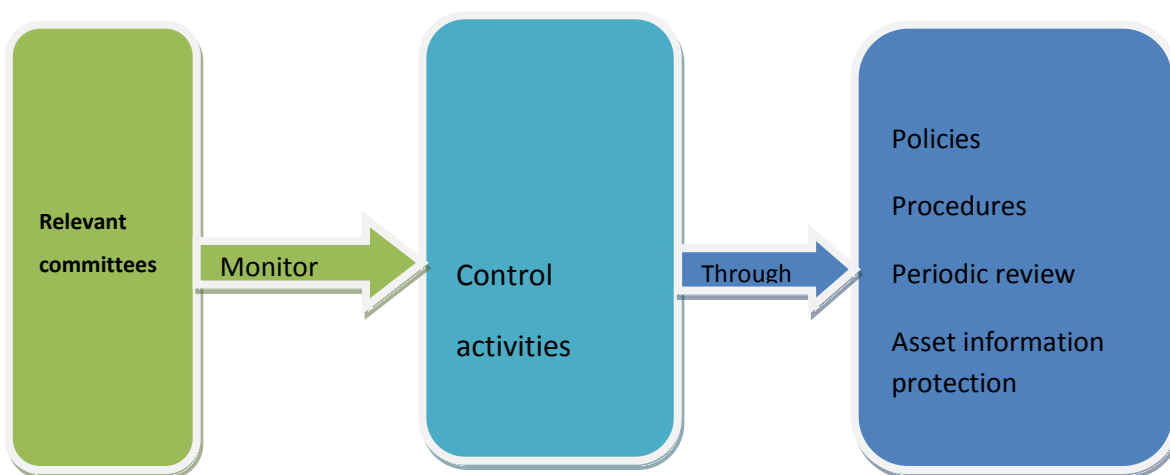


Figure 7.13: Control activities

Source: Researcher's own compilation

7.6.7 Information and communication

There is a need for proper organisational structures that promote relevant flow of information within the organisation as well as outside. A two-way communication, both vertically (i.e. between different management levels management) and laterally (i.e. between departments and employees at the same organisational level), would aid the risk management processes to be continuous, as they undeniably should be. There needs to be mechanisms in place to get information timeously from the external environment. The desired information flow for ERM implementation to be successful is shown in Figure 7.14

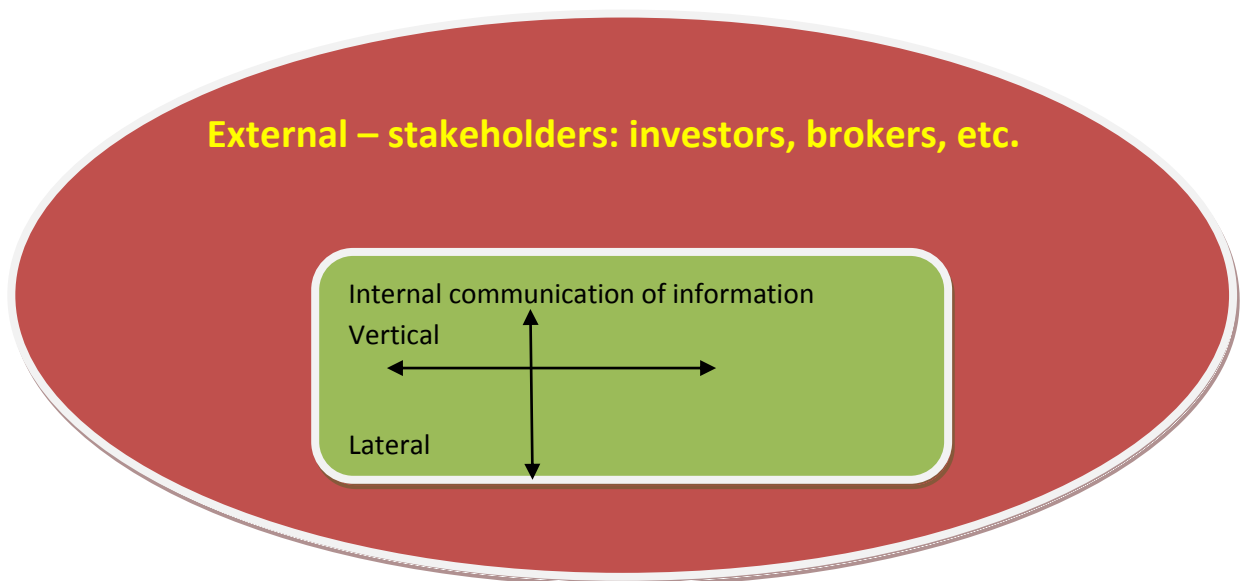


Figure 7.14: Information and communication

Source: Researcher's own compilation

7.6.8 Monitoring

Risk monitoring is another continuous process which interrelates with other ERM components (Louisot & Ketcham, 2014:117). Risks that are being accepted must be in line with the risk appetite of the company. Suggestions from audit functions must be incorporated in the management of risk. Review meetings should be held regularly at all levels, hence enabling continuous monitoring of risk management strategies of the

organisation. Figure 7.15 shows the complete ERM process with all eight components and the way they relate.

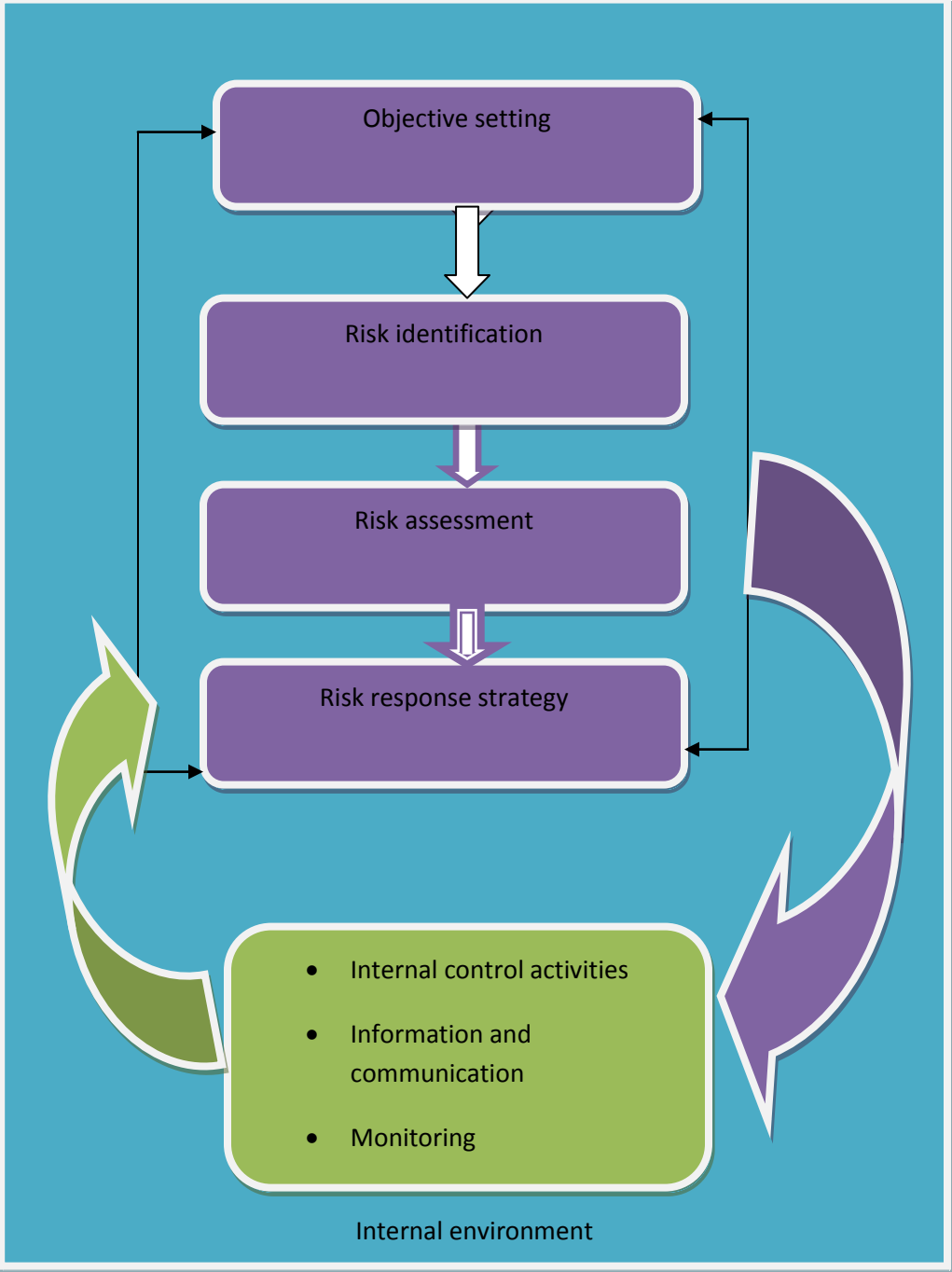


Figure 7.15: ERM implementation process

Source: Researcher’s own compilation

Figure 7.15 shows that, for the implementation of ERM to be a success, there is a need for the creation of an appropriate internal environment. This has to carry on throughout the life of the organisation; it is not a single event. The steps of objective setting, risk identification, risk assessment and risk response occur within an environment conducive to managing risk. When these steps have been taken, the organisation needs to supervise its internal control activities continually, ensuring there is an adequate flow of information and closely monitor risks. This will lead to a continuous identification of risks; thus ERM becomes a cycle.

7.7 Conclusion

This chapter presented the formulation of the ERM evaluation framework, to tackle the primary objective (see Section 7.3). The variables, indicators and suggested maturity levels were indicated and explained in this chapter.

The findings of the study were discussed in an attempt to answer the first and second secondary research objectives (see Section 7.4). Tables and figures were used to summarise the findings of the study. Out of the desired 114 respondents, 90 were obtained, giving a 79% overall response rate. Respondents came from four different enterprise strata: short-term insurance, long-term insurance, reinsurance and brokerage. The insurance industry in Botswana is at the Defined level in terms of ERM maturity for all eight components: internal environment, objective setting, event identification, risk assessment, risk response, internal control activities, information and communication and monitoring. It therefore also follows that the overall ERM maturity level for the insurance industry was at the Defined level (approximately 3).

However, generally there were strata-wise differences in the responses for all components of ERM. Responses differed for certain pairs of strata for a number of ERM components. This was expected since the organisations were engaged in different activities despite being in the same sector.

Finally, the proposed ERMIP was described in this chapter, summarising the whole process as proposed. This framework was prepared for use by the insurance industry in Botswana.

Chapter eight will give conclusions and recommendations of the study based on the findings discussed in this chapter and literature reviewed in Chapters 3 and 4.

CHAPTER EIGHT

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

An enterprise risk management maturity framework (ERMMF) was developed for the insurance industry in Botswana, as the primary objective and the first secondary objective of this study. This was made possible by using criteria that fed into each component of ERM as suggested by the COSO ERM framework. In fulfilment of the second secondary objective, the ERM maturity levels of the insurance industry were evaluated on component and overall bases. The developed ERMMF was utilised to accomplish this objective. The third secondary objective was addressed through comparison of responses that pertained to ERM maturity levels among the four strata: short-term insurers, long-term insurers, brokers and reinsurers. An ERMIP was also developed for the insurance industry in Botswana as indicated by the fourth secondary objective. The ERMIP put into perspective the implementation of ERM in insurance companies, emphasising the need for the treatment of ERM implementation as a process and not as a one-off event. There was also further emphasis on the involvement of all employees in the implementation of ERM and of all stakeholders in coming up with risk management objectives.

The primary objective of the study was to develop an ERM framework to assess ERM maturity levels of the insurance industry in Botswana.

The secondary objectives of the study were as follows:

- to provide a literature overview to prepare an ERM framework to assess the ERM maturity levels of the insurance industry in Botswana;
- to evaluate the ERM maturity levels of the insurance industry in Botswana empirically;

- to establish whether there were differences in responses among different strata within the insurance industry in Botswana.
- to recommend an ERM implementation procedure for the insurance industry in Botswana.

Data was collected from four classes of enterprises within the insurance industry: short-term insurance, long-term insurance, reinsurance and brokerages. The data was analysed using Microsoft Excel and SPSS version 16.

Chapter eight presents a summary of the whole study and gives the conclusion and contribution of the research and recommendations. The rest of the chapter is presented as follows. Section 8.2 summarises each of the six chapters that preceded Chapter seven in this study. Section 8.3 concludes each of the objectives of the study thereby linking it to the literature review reflected in Chapters two to three through comparing and contrasting. There were one primary objective and four secondary objectives. Section 8.4 details contributions of this study to society as a whole. Section 8.5 discusses recommendations of the study to different stakeholders, while section 8.6 discusses limitations of the study. Recommendations for further research are made in section 8.7, leading to the conclusion of the chapter.

8.2 Summary

Chapter one highlighted the background of the study leading to the statement of the problem and research objectives. In giving the background of the study, the chapter introduced the subject of risk management and the envisaged need for it by all organisations in the world. The attention then turned to the need for ERM by insurance companies worldwide. The research objectives – primary and secondary – were introduced in this chapter.

Literature was briefly discussed in this chapter to support the research problem. The literature showed the need for organisations to keep their ERM in check, running it as a

continuous process and regularly assessing the ERM maturity levels of the organisation. This has been necessitated by the rise in risk-related company failures, which could have been avoided had ERM been implemented in good time. It was also in this chapter that risk management and then ERM concepts were introduced thereby comparing the traditional risk management process with ERM. A number of boards and frameworks were highlighted in the chapter as significant contributors towards ERM. Such included the FSB, Basel III and Solvency II, among others.

The chapter further provided an overview of the research methodology and narrowed it down to the research paradigm utilised by this study. The population, the sample and the sampling method were stated in Chapter one. In addition, the survey instrument was described, together with its administration in order to collect the necessary data. The chapter concluded by indicating how the study would contribute to the needs of different stakeholders, who include the insurance industry players and researchers.

Chapter two presented risk management by defining risk and risk management. Different definitions of the two terms were obtained from different authors, thus enabling the researcher to sift key terms from the definitions. There are different types of risks, and these can be grouped in accordance with their characteristics. It was observed that different authors have classified risks in different ways. There is however no correct classification as the classification depends on the type of organisation. The process of risk management was discussed in this chapter, thus laying a foundation for ERM, the main subject of the research. Risk management is seen as a cycle of activities, although this cycle is as prominent as it is in ERM. Risk management strategies, which form part of the risk management process, were explored. These can be divided into physical risk management strategies and financial risk management strategies.

In order to distinguish between risk management strategies and SRM, the chapter was concluded by a brief discussion of SRM. This was seen to be a part of ERM and thus the topic was well placed to connect Chapters two and Chapter three in terms of ERM.

Chapter three (3) continued from Chapter two by presenting a discussion of ERM. ERM sees risks as integrated within the organisation. Unlike traditional risk management, ERM emphasises risk management being championed by the organisational leaders. Everyone in the organisation is involved in the risk management process and therefore not only the CRO is responsible for risk management.

The literature in this chapter also highlighted the benefits of implementing ERM in an organisation. While organisations may be motivated by the benefits of ERM to implement it, the study further perceived that there are other factors that forced organisations to implement ERM. These factors include requirements by regulatory authorities and other global events.

Chapter three presented a discussion of a number of frameworks that arose in a bid to emphasise the urgent need for ERM in all organisations, especially financial organisations. After discussing several frameworks, the most detailed and widely followed framework was deemed to be the COSO ERM framework. This was found to be a reliable guideline for the implementation of ERM and assessment of ERM maturity levels in an organisation. The chapter further reported on the risk maturity models proposed by different scholars. These were to guide the development of the ERMMF for determination of the ERM maturity levels of insurance companies in Botswana.

Chapter four gave an overview of risk management in the insurance industry specifically. Literature confirmed that identification of organisational risks is one of the key elements of ERM. This chapter thus reflected an attempt to put together risks likely to be experienced by the insurance industry. It was found during the study that most of the risks faced by the insurance industry are common to all financial institutions, and only a few were unique to the insurance industry.

The Botswana insurance industry structure was analysed, giving details of the role of the regulator and the different strata found in the insurance industry. The regulator of the insurance industry is NBFIRA, which follows the Insurance Industry Act among other

instruments to regulate the insurance industry. Some of the risk management-related objectives of the regulator were highlighted in the chapter.

The chapter also touched on the Botswana economic overview to highlight the environment in which the insurance industry operates. In conclusion, the chapter presented an analysis of other empirical studies in areas related to this current study. The findings and methodologies in other studies were compared with the current study.

Chapter five provided a discussion of the primary objective, which was to develop an ERM framework to assess ERM maturity levels of the insurance industry in Botswana. It also addressed the first secondary objective, which was to provide a literature overview to prepare an ERM framework to assess the ERM maturity levels of the insurance industry in Botswana. The chapter also presented the ERMMF that was prepared thereby encapsulating the two main models that were used in the development of the framework (the COSO model [2004] and the Aon model [2006]). The conceptual framework inferred from the theoretical framework was presented before the presentation of the ERMMF.

Chapter six reflected the research methodology. The chapter started with assurance by the researcher of the ethical measures that were observed to ensure the study did not infringe on anyone's rights. Throughout any research it is likely that ethical issues will come up, and the researcher indicated how each of these issues was taken care of. Different research designs were discussed in the chapter giving the basis for the choice of research design for this study. In this chapter, the target population, together with the sample, was defined in detail. The different sampling methods were discussed, narrowing down to the one utilised in the study.

Data collection methods were generally highlighted and the specific methods used by the study pinpointed. The design of the survey instrument was discussed after indicating that quantitative data was collected using the instrument while qualitative data was

obtained through a review of the literature. Finally, the data analysis methods were described.

Chapter seven presented a brief view of the prepared ERMMF in fulfilment of the primary objective and the first secondary objective, as discussed in Chapter five. The framework, which was developed from the COSO ERM framework and the risk maturity models, was presented in tables and figures in this chapter. The second secondary objective of the study was to evaluate the ERM maturity levels of the insurance industry in Botswana empirically. This was accomplished by measuring the maturity levels in each of the ERM variables (components), and in general using the developed ERMMF. After measuring the ERM maturity levels of different classes of enterprises within the insurance industry using the ERMMF as developed, it was found that, at the time of this research, the entire insurance industry was at the defined level of maturity and this corresponded with 3 on the measurement scale. For all eight components, the sector was found to be at the Defined level of ERM maturity.

The third secondary objective, which was to establish whether there were differences in the responses among different strata within the insurance industry in Botswana was discussed. Although the entire sector was within the same level of ERM maturity, differences in responses were noted among the majority of the sectors on different components.

Furthermore, this chapter uncovered the prepared ERM process which was developed based on the literature reviewed in Chapters 2, 3 and 4. This was in an attempt to satisfy the requirement of the fourth secondary research objective which was to recommend an ERM implementation procedure for the insurance industry in Botswana. The process was adapted from the COSO ERM eight component framework.

8.3 Conclusion of each objective

The **primary objective** of the study was to develop an ERM framework to assess ERM maturity levels of the insurance industry in Botswana. The eight components of ERM as suggested by the COSO framework were used as a guide to measure ERM maturity levels. Each of the components utilised five criteria for describing each of the eight components. The criteria enable the organisation using the framework to identify exactly what it lacks or how it excels in a particular component. For example, in the internal environment, the organisation is able to see which particular areas of that component might need attention.

A scale of 1–5 was then developed, derived from different risk maturity models and this had five levels: Initial/lacking, Basic, Defined, Operational and Advanced. The scale gave a definition of each level, thus enabling an organisation to gauge at what level of ERM maturity it is for each component. In fact, the organisation is even able to measure its maturity level in each criterion as a sub-part of a component. The scale can also be used in determining the overall ERM level of an organisation.

Secondary objective one was to compile a literature overview to prepare an ERM framework to assess the ERM maturity levels of the insurance industry in Botswana.

The objective was fulfilled through review of literature as discussed in Chapters two, three and four, and finally presenting the theoretical and conceptual frameworks in Chapter 5. The ERMMF was subsequently presented in the same chapter.

Secondary objective two: was to evaluate the ERM maturity levels of the insurance industry in Botswana empirically.

This objective was satisfied by collecting data through a questionnaire and subjecting the data to analysis through SPSS. The results were that, at the time of this research, the insurance industry in Botswana was at the Defined level in all the eight components, namely internal environment, event identification, objective setting, risk assessment, risk response, internal control activities, information and communication and monitoring of

ERM adopted from the COSO ERM framework. It then followed that overall, the entire sector was at the Defined level of ERM. Using the prepared ERMMF, this was interpreted to mean that the industry was generally aware of ERM and had measures in place to safeguard risks but no follow-ups had been made to take ERM as a regular continuous process. This resembles the European and Latin American situation in 2009 where insurance companies had implemented risk management through having risk-related objectives for compliance purposes. However, the objectives were then not followed up (Everis, 2009:20–26). In their 2014 study in Nigeria, Deloitte however used a different risk management maturity scale (Deloitte, 2014:5b). Clearly, the Nigerian insurance companies were still at more or less the same level in 2014 as the Botswana insurance industry in 2016. The regulator in the Botswana insurance industry also emphasised the issue of ERM. It therefore appeared that the insurance industry had implemented ERM mainly for compliance purposes.

The findings further showed that, at the time of this research, the insurance industry in Botswana fell short of the Standard & Poor's (2007) estimated prediction of the ERM levels in the insurance industry by 2017. Figure 7.1 shows the predicted evolution of ERM in the insurance industry and Botswana's position as at 2016. Clearly, it would be overambitious to postulate that Botswana would have reached the predicted levels by 2017.

Evolution of Enterprise Risk Management

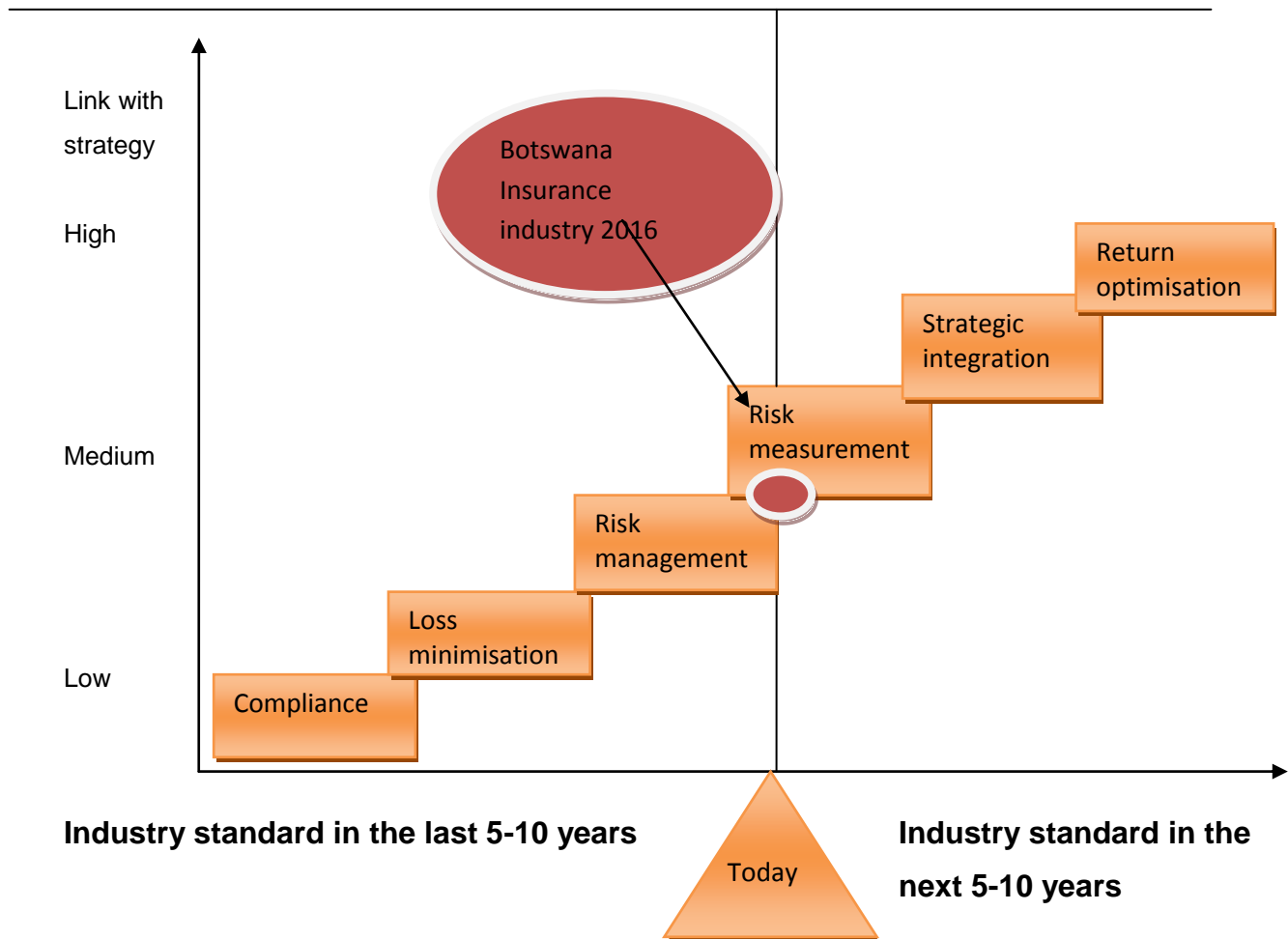


Figure 8.1: Evolution of ERM

Source: Adopted from Standard and Poor's (2007)

Secondary objective three was to establish whether there were differences in responses among different strata within the insurance industry in Botswana.

Differences were noted in the responses from different strata (short-term insurance, long-term insurance, reinsurance, brokerage) on the eight components of ERM. In this regard, the findings of this study are congruent with the findings of the study that was

conducted in Ghana by Akotey and Abor (2013). Their study concluded that the risk management practice levels differed between short-term insurers and long-term insurers.

As shown earlier in the literature, the different strata are faced with more or less similar risks which could be, for example insurance risk, credit risk, market risk, operational risk (Economic Research & Consulting, Swiss Reinsurance, 2004; Institute and Faculty of Actuaries, 2016:2, KPMG, 2015; PWC, 2008). It was also noted that the differences could lie in the magnitude of risks explained by the unique qualities of each stratum. It can therefore be assumed at this point that the differences in responses between different strata in the eight components could have been due to the unique qualities of each type of business and the different business goals and approaches of each.

Secondary objective four was to recommend an ERM implementation procedure for the insurance industry in Botswana.

The process was formulated using the COSO ERM framework as a guideline. It engaged all eight components of the COSO framework: internal environment, objective setting, event identification, risk assessment, risk response, internal control activities, information and communication, and monitoring.

The process emphasised the interrelatedness of each of the components as well as the continuity of the process. Once the decision has been made to implement ERM, the next step is to develop a detailed implementation plan, which should be shared with the entire company. The plan must not focus on the management of negative risk only, but also on positive (upside) risks (when objectives produce more than anticipated returns). The plan must be mindful of the effect these risks could have on all stakeholders across the company (Deighton et al., 2009:36). The ERM strategy and the vision must be clearly spelt out. The process thrives in a proper environment, which must be created deliberately by the company top management. There must be genuine acceptance of

joint responsibility between non-executive and executive directors (Deighton et al., 2009:39).

When top management has shown commitment to the implementation of ERM, created a favourable environment and facilitated the embedment of ERM in the company objectives, the steps of risk identification, risk assessment and risk assessment follow. It is then up to the organisation to enforce and maintain proper internal controls and to ensure that information circulates freely within the organisation. The whole process must be monitored continuously.

8.4 Contribution of the study

The study contributes to the existing body of knowledge by the development of an ERM maturity measurement framework for use by the insurance industry in Botswana. This framework will enable organisations to monitor their maturity levels and thus improve where they need to. The framework measures the maturity levels overall, at component level and at criteria level, thereby allowing the organisations to concentrate on identifying specific areas that may need strengthening. The framework that was developed was used in the study, thus confirming its usability.

The study further contributes by recommending an ERMIP for the insurance industry in Botswana. During the study, the steps to be taken were clearly formulated as well as suggested ways of keeping ERM thriving within an organisation. Each step of implementation is given and then there is an indication of how each component relates within the ERMIP.

ERM implementation was said to be a challenge still for the insurance industry in general, although significance progress had been made by 2009 in its implementation (Scor, 2009:24); hence, the implementation process was expected to be of assistance to the insurance industry.

8.5 Recommendations

Insurance company leaders are required to play an active role in implementing and maintaining ERM. They are the ones to initiate the cultivation of the proper internal environment for risk management. In addition, they are to ensure that risk-related objectives are set at strategic level. However, when setting the objectives there is a need to involve all stakeholders. It should also be noted that ERM is a continuous process involving everyone.

The insurance industry in Botswana needs to strengthen its ERM processes to a higher level to survive the financial turbulence prevalent in the whole world. Being at the Defined level is not helping at all as it only serves to comply to regulatory demands while the organisations are not safe from the risk effects. While the organisations in the sector already have ERM, it is recommended that they revisit their ERMIP, thereby involving the company management and all the employees. It would be helpful for the organisations to measure their ERM maturity levels continually to foster ongoing improvement.

The regulatory body is advised to apply stricter measures in making ERM a requirement for all players in the insurance industry. It would help to require that risk reporting be as mandatory as financial reporting for all players in the insurance industry in Botswana. This will benefit the companies while also benefiting the stakeholders.

8.6 Limitations of the study

The study was concentrated on the insurance industry in Botswana. It however dealt with insurance companies, re-insurers and brokerages, leaving out agencies. This was because most agencies do not operate from offices and do not have established processes and procedures. In addition, most agents were found not to be familiar with the terms used in risk management. They only seemed to know their link to brokers. They were therefore not part of the study.

Another limitation was that the study was meant to have 114 participants in total. However, not all responses were obtained. This was the result of data being collected at a busy period when the organisations in the insurance industry were preparing financial year end reports and tax returns.

The study compared responses between different strata within the insurance industry. While the responses were found to be different from one strata to another in most cases, it was not examined to what extent the responses differed. It is recommended that future researchers establish whether the differing responses could mean that the strata might have been at different levels of ERM maturity levels in some components at the time of this research.

8.7 Areas for further research

It is recommended that another, similar study be conducted in another sector, as according to the researcher's knowledge, no study has assessed the ERM maturity levels in any sector in Botswana. ERM is a helpful process in all sectors and organisations must know their ERM maturity levels. Another study could compare maturity levels among different strata within the insurance industry. This would allow each sector to attend to its specific weaknesses in each component.

Literature gives the benefits of ERM. It would be useful to carry out a study that measures the correlation between the ERM maturity levels and the company value.

REFERENCES

- Abkowitz, M. & Camp, J. 2017. Perspective structuring an enterprise risk assessment protocol: Traditional practice and new methods. *Risk Management and Insurance Review*, 20(1):79–97.
- ACT (Association of Corporate Treasurers). 2006. *The role of the treasurer in enterprise risk management*. Retrieved from:
http://www.treasurers.org/ACTmedia/mowact_enterpriserisksurvey.pdf
[Accessed 23 January 2016].
- Akotey, J.O. & Abor, J. 2013. Risk management in the Ghanaian insurance industry. *Qualitative Research in Financial Markets*, 5(1):26–42.
- Alviunessen, A. & Jankensgard, H. 2009. Enterprise risk budgeting: Bringing risk management into the financial planning process. *Journal of Applied Finance*, 19(1):178–190.
- American Academy of Actuaries. 2013. *Insurance enterprise risk management practices*. Retrieved from:
http://www.actuary.org/files/ERM_practice_note_030713_exposure.pdf
[Accessed 29 August 2013].
- Anderson, E.J. 2014. *Business risk management: Models and analysis*. West Sussex: Wiley.
- AON. 2010. *Global Enterprise Risk Management Survey*. Retrieved from:
http://www.aon.com/attachments/2010_global_ERM_Survey.pdf [Accessed 13 August 2015].
- AON. 2014. *Solvency II – An overview of the challenges for insurers*. Retrieved from:
http://www.maltaprofile.info/uploads/files/956_81_publication_Solvency-II-Report.pdf [Accessed 12 June 2014].
- APM (Association for Project Management). 2000. *Project risk analysis and a structured approach to enterprise risk management*. Retrieved from:
<https://www.apm.org.uk/sites/default/files/protected/APM%20Risk%20SIG%20View%20From%20The%20Chair%20-%20complete%20manuscript.pdf> [Accessed 6 June 2015].

- Appannaiah, H., Reddy, P. & Ramanath, H. 2010. *Business research methods*. Mumbai: Himalaya.
- Ariff, M.S.B.M., Zakuan, N., Tajudin, M.N.M., Ahmad, A., Ishak, N. & Ismail, K. 2014. A Framework for Risk Management Practices and Organizational Performance in Higher Education. *Review of Integrative Business and Economics Research*, 3(2):422-432.
- Arthearn, J.L. & Pritchett, S.T. 1984. *Risk and insurance*. Minnesota: West Publishing Company.
- AS/NZS (Australian and New Zealand risk management standard) ISO 31000. 2009. Risk management — Principles and guidelines. Available from: <https://policy.deakin.edu.au/download.php?id=214&version=3&associated> [Accessed, 20 June 2015].
- Association of Corporate Treasurers (ACT). 2006. The role of the Treasurer in Enterprise Risk Management. Available from: http://www.treasurers.org/ACTmedia/mowact_enterpriserisksurvey.pdf [Accessed 23 January 2016].
- Athanasios K. & George, R. 2013. Political, Economic, Social, Technology, Legal and Environmental (PESTLE) Approach for Risk Identification of the Tidal Industry in the United Kingdom. *Energies*, 6:5023-5045.
- Bainbridge, S.M. 2009. Enterprise risk management. *The Journal of Corporate Finance*, 94:862–869.
- Barr, A. 2012. *Emerging Risks : A Strategic Management Guide*. Farnham: Taylor and Francis.
- Basel Committee on Banking Supervision. 2004. *International convergence of capital measurement and capital standards: Basel II*. Retrieved from: <http://www.bis.org/publ/bcbs107.pdf> [Accessed 23 January 2016].
- Basel Committee on Banking Supervision. 2010. *Basel III: International framework for liquidity risk measurement, standards and monitoring*. Retrieved from: <http://www.bis.org/publ/bcbs188.pdf> [Accessed 23 January 2016].

- Baxter, R., Bedard, J.C., Hoitash, R. & Yezegel, A. 2012. Enterprise risk management program quality: Determinants, value relevance, and the financial crisis. *Contemporary Accounting Research*. 30(4): 1264-1295.
- BaxterBruce. 2013. *Enterprise risk management: The challenges and benefits of implementing ERM*. Retrieved from: <http://www.baxterbruce.com/wp-content/uploads/2013/05/ERM-The-Challenges-and-Benefits-of-Implementing-ERM.pdf> [Accessed 23 January 2016].
- Beasley, M. S., Jenkins, J. G. & Sawyers, R. B. 2006. Brainstorming to identify and manage tax risks. *The Tax Adviser*, 37(3):158-162.
- Bernstein, P.L. 1998. *Against the gods: The remarkable story of risk*. New York, NY: Wiley.
- Bhandarkar, P., Wilkinson, T. & Laldas, D. 2009. *Methodology and techniques of social research*. Mumbai: Himalaya.
- Bhattacharya, K. 2010. *Risk management in Indian banks*. Mumbai: Himalaya.
- Bhattacharyya, D.K. 2006. *Research methodology*. Second edition. New Delhi: Excel Books.
- Blanche, M.T., Durrheim, K. & Painter, D. 2006. *Research in practice: Applied methods for social sciences*. Second edition. Cape Town: UCT Press.
- Borghesi, A. & Gaudenzi, B. 2012. *Risk management: How to assess, transfer and communicate critical risks*. Milan: Springer Verlag.
- British Standards Institute. 2008. British Standard, BS 31100. Retrieved from: <https://www.rims.org/resources/ERM/Documents/RIMS%20Executive%20Report%20on%20Widely%20Used%20Standards%20and%20Guidelines%20March%202010.pdf> [Accessed 12 January 2014].
- Bryman, A. & Bell, E. 2007. *Business research strategies: Business research methods*. Second edition. Oxford: Oxford University Press.
- Bunting, K. S., Kirkpatrick, J. S. & Kurtz, K. S. 2011. Possibilities and pitfalls with captive insurance companies. *Estate Planning*, 38(8):3-13.
- CAS (Casualty Actuarial Society). 2003. *Overview of enterprise risk management*. Retrieved from: <http://www.casact.org/research/erm/overview.pdf> [Accessed 3 August 2013].

- CGIAR (Consultative Group for International Agricultural Research). 2006. *Internal audit unit*. Retrieved from: www.cgiar.org/pdf/agm08/agm08_CGIAR-technical-report.pdf [Accessed 2 June 2014].
- Chapman, R.J. 2006. *Simple tools and techniques for enterprise risk management*. Chichester: Wiley.
- Chapman, R.J. 2011. *Simple tools and techniques for enterprise risk management*. Second edition. Chichester: Wiley.
- Chartered Enterprise Risk Analyst. 2013. *Enterprise risk management fact sheet*. Retrieved from: <https://www.soa.org/Files/Newsroom/news-erm-cera-fact-sheet.pdf> [Accessed 3 August 2013].
- Chauhan, R. 2012. *Research methodology: An introduction*. New Delhi: Kunal Books.
- Cheese, P. 2016. Managing risk and building resilient organisations in a riskier world. *Journal of Organizational Effectiveness: People and Performance*, 3(3):323–331.
- Choi, J.J., Mao, C.X. & Upadhyay, A. 2013. Corporate risk management under information asymmetry. *Journal of Business Finance & Accounting*, 40(2):239–271.
- CIMA (Chartered Institute of Management Accountants). 2008. *Introduction to managing risk*. Topic Gateway series no. 28. Retrieved from: http://www.cimaglobal.com/Documents/ImportedDocuments/cid_tg_intro_to_managing_rist.apr07.pdf [Accessed 16 January 2016].
- Giorciari, M. & Blattner, P. 2008. *Enterprise risk management maturity-level assessment tool*. Society of Actuaries. Retrieved from: <https://www.soa.org/library/.../2008/april/mono-2008-m-as08-1-ciorciari-abstract.pdf> [Accessed 13 August 2013].
- Coetzee, G.P. & Lubbe, D. 2013. The risk maturity of South African private and public sector organisations. *Southern African Journal of Accountability and Auditing Research*, 14:45–56.
- Cohen, L., Manion, L. & Morrison, K. 2007. *Quantitative data analysis: Research methods in education*. New York, NY: Routledge.
- Coleman, D.Y. 2013. Economic overview. *Botswana Country Review*: 57–58.

- COSO (Committee of Sponsoring Organisations of the Treadway Commission). 2004. *Enterprise risk management: Integrated framework*. Retrieved from: <http://www.coso.org> [Accessed 2 August 2013].
- Cronbach, L. 1951. Coefficient alpha and the internal structure of tests. *Psychometrika*, 16:297–334.
- Crowford, G.N. 1982. The bibliography and history of risk management: Some preliminary observations. *The Geneva Papers on Risk & Insurance*, 7:169–179.
- Cruz, M.G., Peters, G.W. & Shevchenko, P.V. 2015. *Fundamental Aspects of Operational Risk and Insurance Analytics : A Handbook of Operational Risk*, Somerset: Wiley.
- Curtis, P. & Carey, M. 2012. Risk assessment in practice. Deloitte and Touche. Retrieved from: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Governance-Risk-Compliance/dttl-grc-riskassessmentinpractice.pdf> [Accessed 3 August 2013].
- Daud, W.W., Yazid, A.S. & Hussin, M.R. 2010. The effect of chief risk officer on enterprise risk management practices: Evidence from Malaysia. *International Business and Economics Research Journal*, 9(11):55–64.
- De Beuckelaer, A. & Wagner, S.M. 2012. Small sample surveys: Increasing rigor in supply chain management research. *International Journal of Physical Distribution & Logistics Management*, 42(7):615–639.
- Decaux, L. & Sarens, G. 2015. Implementing combined assurance: Insights from multiple case studies. *Managerial Auditing Journal*, 30(1):56–79.
- Deighton, S.P., Dix, R.C., Graham J.R. & Skinner, J.M.E. 2009. Governance and risk management in United Kingdom insurance companies. *British Actuarial Journal*, 15(3):503–556.
- Deloitte. 2006. The risk intelligent enterprise: ERM done right. Retrieved from: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Governance-Risk-Compliance/dttl-grc-riskintelligent-erm-doneright.pdf> [Accessed 2 May 2014].

- Deloitte. 2008. Perspectives on ERM and the risk intelligent enterprise: Enterprise Risk Management Benchmark Survey. Deloitte Development LLC. Retrieved from: www.ipai.pt/fotos/gca/surveyerm_pt_1_1233338524.pdf [Accessed 2 January 2013].
- Deloitte. 2014a. Global survey on reputation risk. Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Governance-Risk-Compliance/gx_grc_Reputation@Risk%20survey%20report_FINAL.pdf [Accessed 13 August 2015].
- Deloitte. 2014b. Insurance risk management survey: State of the industry in Nigeria. Retrieved from: https://www2.deloitte.com/content/dam/Deloitte/ng/Documents/risk/ng_Deloitte_Insurance_Risk_Management_Survey.pdf [Accessed 13 January 2013].
- Deloitte. 2015. Swiss ORSA: Key challenges for implementation and differences to Solvency II ORSA. Retrieved from: <https://www2.deloitte.com/content/dam/Deloitte/ch/Documents/financial-services/ch-en-fs-swiss-orsa.pdf> [Accessed 12 June 2014].
- Dun & Bradstreet. 2007. Financial risk management. New Delhi: Tata McGraw-Hill.
- EC (European Commission). 2010. European textbook on ethics in research. Retrieved from: https://ec.europa.eu/research/science-society/document_library/pdf_06/textbook-on-ethics-report_en.pdf [Accessed 2 August 2013].
- EFQM (European Foundation for Quality Management). 2013. An overview of the EFQM excellence model. Retrieved from: http://www.efqm.org/sites/default/files/overview_efqm_2013_v1.pdf [Accessed 13 August 2013].
- EIOPA (European Insurance and Occupational Pensions Authority). 2017. Learning lessons from Solvency II. Retrieved from: <https://eiopa.europa.eu/Publications/Interviews/Article-Enterprise%20Risk.pdf> [Accessed 8 February, 2017].
- Ekramy, S. M. & Mellett, H. 2013. Competition, corporate governance, ownership structure and risk reporting. *Managerial Auditing Journal*, 28(9):838-865.

- ESRB (European Systemic Risk Board). 2015. Report on systemic risks in the EU insurance industry. Retrieved from:
https://www.esrb.europa.eu/pub/pdf/other/2015-12-16-esrb_report_systemic_risks_EU_insurance_sector.en.pdf [Accessed 12 February 2016].
- European Parliament and council. 2007. Solvency II. Retrieved from: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0361:FIN:EN:HTML> [Accessed 16 June 2016].
- Everis. 2009. Risk management in the insurance business sector. Retrieved from: www.pdfdrive.net/risk-management-in-the-insurance-business-sector-e514563.html.pdf [Accessed 12 January 2015].
- EY. (Ernest and Young) 2013. Insurance enterprise risk management. Singapore CRO Roundtable Series. Retrieved from:
[http://www.ey.com/Publication/vwLUAssets/Insurance_Enterprise_Risk_Management:_Singapore_CRO_Roundtable_Series/\\$FILE/EY-CRO-roundtable-series.pdf](http://www.ey.com/Publication/vwLUAssets/Insurance_Enterprise_Risk_Management:_Singapore_CRO_Roundtable_Series/$FILE/EY-CRO-roundtable-series.pdf) [Accessed 2 February 2014].
- FERMA (Federation of European Risk Management Associations). 2003. A risk management standard. Retrieved from:
<http://www.ferma.eu/app/uploads/2011/11/a-risk-management-standard-english-version.pdf> [Accessed 20 August 2014].
- FRC (Financial Reporting Council). 2005. The Turnbull Report. Internal control: Revised guidance for directors on the combined code (October 2005). Retrieved from:
<https://www.frc.org.uk/getattachment/5e4d12e4-a94f-4186-9d6f-19e17aeb5351/Turnbull-guidance-October-2005.aspx> [Accessed 12 June 2014].
- Frigo & Anderson. 2011. Strategic management. Retrieved from:
http://www.markfrigo.com/What_is_Strategic_Risk_Management_-_Strategic_Finance_-_April_2011.pdf [Accessed 13 November 2015].
- FSB (Financial Stability Board). 2009. Financial Stability Board Charter. Retrieved from:
http://www.fsb.org/wp-content/uploads/r_090925d.pdf?page_moved=1 [Accessed 16 June 2017].

- Government of Botswana. 2015. Insurance Act of Botswana. Chapter 46:1. Retrieved from:
<http://www.nbfira.org.bw/sites/default/files/INSURANCE%20INDUSTRY%20ACT.pdf> [Accessed 12 June 2016].
- Graham. L. 2015. Internal Control Audit and Compliance: Documentation and Testing under the New COSO Framework. Somerset: John Wiley & Sons.
- Greene, M.R. & Serbein, O.N. 1983. Influence of risk management on performance: An empirical study of risk management – Text and cases. Virginia: Reston.
- Gupta, P.K. 2007. Fundamentals of insurance. Mumbai: Himalaya.
- Gupta, P.K. 2011. Risk management in Indian companies: EWRM concerns and issues. *The Journal of Risk Finance*, 12(2):121-139.
- Gupta, P.K. 2014. Insurance and risk management. Mumbai: Himalaya.
- Helms, M.M. & Nixon, J. 2010. Exploring SWOT analysis: Where are we now? *Journal of Strategy and Management*, 3(3):215–251.
- Her Majesty's Treasury. 2004. The Orange Book Management of Risk – Principles and concepts. Retrieved from:
<http://www.who.int/management/general/risk/managementofrisk.pdf> [Accessed 20 August 2013].
- Hillson, D.A. 1997. Towards a risk maturity model. *The International Journal of Project & Business Risk Management*, 1(1):35–45.
- HKIB (Hong Kong Institute of Bankers). 2011. Operational risk management. Somerset: Wiley.
- Homeland Security. 2010. Executing a critical infrastructure risk management approach. Retrieved from: <https://www.dhs.gov/sites/default/files/publications/NIPP-2013-Supplement-Executing-a-CI-Risk-Mgmt-Approach-508.pdf> [Accessed 13 August 2015].
- Hopkin, P. 2010. Fundamentals of risk management: Understanding, evaluating and implementing effective risk management. London: Institute of Risk Management.
- Hopkinson, M. 2000. Risk Maturity Models in Practice. *Risk Management Bulletin* 5(4).
- Hopkinson, M. 2012. The project risk maturity model: Measuring and improving risk management capability. Burlington: Gower.

- Horney, N., Pasmore, B. & O'Shea, T. 2010. People & strategy: Leadership agility: A business imperative for a VUCA world. Retrieved from: <http://agilityconsulting-com.secure37.ezhostingserver.com/resources/Agility%20Leader/Leadership%20Agility%20HRPS%20Reprint%20Revised.pdf> [Accessed 3 August 2013].
- Hoyt, R.E. & Liebenberg, A.P. 2011. The value of enterprise risk management. *Journal of Risk and Insurance*, 78(4):795–822.
- Hudgins, S.C. & Rose, P.S. 2010. *Bank management & financial services*. Seventh edition. New Delhi: Tata McGraw-Hill.
- Hull, J.C. 2012. *Risk management and financial institutions*. Third edition. New Jersey: Wiley.
- Humphrey, W.S. 1987. *Characterizing the software process: A maturity framework*. Software Engineering Institute. Retrieved from: <http://www.sei.cmu.edu/reports/87tr011.pdf> [Accessed 20 August 2013].
- IAA (International Actuarial Association). 2016. Actuarial aspects of ERM for insurance companies. Retrieved from: http://www.actuaries.org/CTTEES_FINRISKS/Papers/ActuarialAspectsofERMforInsuranceCompanies_January2016.pdf [Accessed on 15 April 2016].
- IACCM (International Association for Contract and Commercial Management). 2003. Organisational maturity in business risk management. Retrieved from: <http://theriskdoctor.com.au/wp-content/uploads/.../Final-TRD-Disc-Gp-PPs-for-3-7-12.pdf> [Accessed 13 August 2013].
- IAIS (International Association of Insurance Supervisors). 2006. A core curriculum for insurance supervisors. Retrieved from: http://www.iaisweb.org/modules/cciais/assets/files/pdf/061002_-_ICP_2__Supervisory_Objectives.pdf [Accessed 2 February 2016].
- IAIS (International Association of Insurance Supervisors). 2011. Insurance core principles, standards, guidance and assessment methodology. Retrieved from: https://www.iaisweb.org/modules/icp/assets/files/Insurance_Core_Principles__Standards__Guidance_and_Assessment_Methodology__October_2011__revised_October_2013_.pdf [Accessed 2 February 2016].

- IAIS (International Association of Insurance Supervisors). 2015. Insurance core principles. Retrieved from: <https://www.iaisweb.org/page/supervisory-material/insurance-core-principles> [Accessed 2 February 2016].
- IC Publications. 2011. Botswana bounces back. Retrieved from: http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2010-11.pdf [Accessed 12 October 2014].
- IIA (The Institute of Internal Auditors). 2004. Introduction to professional practices framework. Retrieved from: <http://www.unepfi.org/> [Accessed 13 August 2014].
- IIA (The Institute of Internal Auditors). 2012a. Assurance mapping: Charting the course for effective risk oversight. Retrieved from: http://www.wsucess.com/iaa/IIA_Assurance_Mapping.pdf [Accessed 30 June 2017].
- IIA (The Institute of Internal Auditors). 2012b. Coordinating risk management and assurance. Retrieved from: https://www.iaa.org.uk/media/56398/coordinating_risk_management_and_assurance.pdf [Accessed 30 June 2017].
- Ikhide, S. & Yinusa, O. 2012. Why is the cost of financial intermediation rising in Botswana? *The Journal of Developing Areas*, (46)1:183–209.
- Institute and Faculty of Actuaries. 2016. Solvency II. Retrieved from: <https://www.google.co.bw/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwi1pMmv5qzQAhVaOMAKHRR-A7wQFggXMAA&url=https%3A%2F%2Fwww.actuaries.org.uk%2Fdocuments%2Fsolvency-ii-life-insurance&usg=AFQjCNGVfifRuFScAJIXZrD7L8yKzfKyA&sig2=G07aYBzCYY5gkxuS3spTnA> [Accessed 8 March 2016].
- IoDSA (Institute of Directors Southern Africa). 2009. King III Report on corporate governance for South Africa. Pretoria. Available from: admin.sun.ac.za/admin/Finance/new/docs/king%20III.pdf [Accessed 02 February 2015].
- IoDSA (Institute of Directors Southern Africa). 2016. King IV. Report on Corporate Governance for South Africa. Pretoria. Retrieved from:

- http://c.ymcdn.com/sites/www.iodsa.co.za/resource/resmgr/king_iv/King_IV_Report/IoDSA_King_IV_Report_-_WebVe.pdf [Accessed 20 March 2017].
- IRA (Insurance Regulatory Authority). 2013. Guideline to the insurance industry on insurance risk. Retrieved from:
<http://www.ira.go.ke/attachments/article/63/Guideline%20on%20Insurance%20Risk.pdf> [Accessed 8 March 2016].
- IRM (Institute of Risk Management). 2002. A risk management standard. Retrieved from: https://www.theirm.org/media/886059/ARMS_2002_IRM.pdf [Accessed 29 August 2013].
- IRM (Institute of Risk Management), AIRMIC (Association of Insurance and Risk Managers) & Public Risk Management Association. 2010. A structured approach to enterprise risk management. Retrieved from:
https://www.theirm.org/media/886062/ISO3100_doc.pdf [Accessed 29 August 2013].
- ISO (International Organization for Standardization). 2009a. Guide 73. Retrieved from:
http://www.iso.org/iso/catalogue_detail?csnumber=44651 [Accessed 13 January 2014].
- ISO (International Organization for Standardization). 2009b. ISO31000-2009 – Risk management – Principles and guidelines. Retrieved from:
https://www.finance.gov.au/sites/default/files/COV_216905_Risk_Management_Fact_Sheet_FA3_23082010_0.pdf [Accessed 13 August 2014].
- Jha, N. 2008. Research methodology. Chandigarh: Abhishek.
- Kelly P.J., Webster A.C. & Craig, J.C. 2010. How many patients do we need for a clinical trial? Demystifying sample size calculations. *Nephrology*, 159(8):725–731.
- Kerstin, D., Simone, O. & Nicole, Z. 2014. Challenges in implementing enterprise risk management. *ACRN Journal of Finance and Risk Perspectives*, 3(3):1–14.
- Khan, M.J., Hussain, D. & Mehmood, W. 2016. Why do firms adopt enterprise risk management (ERM): Empirical evidence from France. *Management Decision*, 54(8):1886–1907.

- Kleffner, A.E., Lee, R.B. & McGannon, B. 2003. The effect of corporate governance on the use of enterprise risk management: Evidence from Canada. *Risk Management and Insurance Review*, 6(1):53–73.
- Kotreshwar, G. 2007. *Risk Management Insurance and Derivatives*. Mumbai: Global Media.
- KPMG. 2015. Solvency II: A closer look at the evolving process transforming the global insurance industry. Retrieved from:
<https://www.kpmg.com/US/en/IssuesAndInsights/ArticlesPublications/Documents/solvency-II.pdf> [Accessed 23 August 2016].
- KPMG International. 2006. Enterprise risk management in the United States: A 2006 report card. Retrieved from:
http://www.sdabocconi.it/files/kpmg_en_version_339QIKWY11U2ZKUEHUY51224057629.pdf [Accessed 3 August 2014].
- Krishnaswami, O. & Ranganatham, M. 2009. *Methodology of research in social sciences*. Mumbai: Himalaya.
- Krishnaswami, O. & Satyaprasad, B. 2010. *Business research methods*. Mumbai: Himalaya.
- Krstic, J. & Dordevic, M. 2012. From traditional to revised Coso Model. *Internal Control and Enterprise Risk Management*, 50(2):151–166.
- Kuada, J. 2012. *Research methodology: A project guide for university students*. Frederiksberg: Samfundslitteratur Press.
- Laeven, R.J.A. & Perotti, E.C. 2010. Optimal capital structure for insurance companies. Netspar discussion paper no. 11/2010-073. Netherlands.
- Lalonde, C. & Boiral, O. 2012. Managing risks through ISO 31000: A critical analysis. *Risk Management*, 14(4):272–300.
- Landsittel, D. L. & Rittenberg, L. E. 2010. COSO: Working with the academic community. *Accounting Horizons*, 24(3), 455-469.
- Li, X. 2009. Corporate risk management and investment decisions. *The Journal of Risk Finance*, 10(2):155-68.

- Lloyd's. 2006. Lloyd's Risk Management Tool Kit. Retrieved from:
<http://ub.com.vn/attachments/lloydsrmtoolkit-pdf.3951/> [Accessed 2 February 2016].
- Louisot, J. & Ketcham, C. H. 2014. ERM - Enterprise Risk Management: Issues and Cases. Somerset: Wiley.
- Macmillan English Dictionary. 2002. London: Macmillan.
- Malone, H. E., Nicholl, H. & Coyne, I. 2016. Fundamentals of estimating sample size. *Nurse Researcher* (2014+), 23(5), 21-25.
- Manab, N.A., Hussin, M.R. & Kassim, I. 2007. Empirical study on theory and practice of enterprise-wide risk management on internal auditing and risk management functions of public listed companies in Malaysia. Retrieved from:
http://www.rmi.nccu.edu.tw/apria/docs/Concurrent%20IV/Session%201/14707EWRM_APRIA_2007_New.doc [Accessed 13 August 2013].
- Manab, N.A., Kassim, I. & Hussin, M.R. 2010. Enterprise-wide risk management (EWRM) practices: Between corporate governance compliance and value creation. *International Review of Business Research Papers*, 6(2):239–252.
- Marchetti, A.M. 2012. Enterprise risk management best practices. From assessment to ongoing compliance. New Jersey: Wiley.
- MetricStream. 2016. Improve GRC maturity through combined assurance. White Paper. Retrieved from: <http://info.metricstream.com/rs/404-BGD-511/images/Improve-GRC-Maturity-Combined-Assurance.pdf?alilid=329680907> [Accessed 30 June 2017].
- Mitchell, V. 1996. Assessing the reliability and validity of questionnaires: An empirical example. *Journal of Applied Management Studies*, 5(2):219–237.
- Moeller, R.R. 2011. COSO enterprise risk management: Establishing effective governance, risk and compliance (GRC) processes. Hoboken: Wiley.
- Moody, M.J. 2012. ERM: Moving beyond assessment. *Rough Notes*, 155(3):26–28.
- Mpofu, R.T., De Beer, J.S., Nortje, A. & Van de Venter, T.W.G. 2010. Investment management. Third edition. Pretoria: Van Shaik.
- National Advisory Board on Research Ethics. 2009. Ethical principles of research in the humanities and social and behavioural sciences and proposals for ethical review.

- Retrieved from: www.tenk.fi/sites/tenk.fi/files/ethicalprinciples.pdf [Accessed 13 August 2013].
- NBFIRA (Non-Banking Financial Institutions Regulatory Authority). 2014. Annual report. Retrieved from: <http://www.nbfira.org.bw/sites/default/files/NBFIRA%20Annual%20Report%202014.pdf> [Accessed 2 January 2015].
- NBFIRA (Non-Banking Financial Institutions Regulatory Authority). 2015. Annual report. Retrieved from: [http://www.nbfira.org.bw/sites/default/files/2015%20NBFIRA%20Annual%20Report%20Inside%20Pages%20\(003\).pdf](http://www.nbfira.org.bw/sites/default/files/2015%20NBFIRA%20Annual%20Report%20Inside%20Pages%20(003).pdf) [Accessed 2 February 2016].
- Neil, A.W. 2007. Elementary statistics. Boston: Addison-Wesley.
- OECD (Organisation for Economic Co-operation and Development). 2014. Risk management and corporate governance. Retrieved from: <http://dx.doi.org/10.1787/9789264208636-en> [Accessed 20 July 2015].
- OGC (Office of Government Commerce). 2007. Management of risk: Guide for practitioners. Retrieved from: https://www.internationalbestpractice.com/gempdf/Lead_Author_Overview_July_07.pdf [Accesses 3 August 2014].
- Olso, D.L. & Desheng, W. 2010. Enterprise risk management models. New York, NY: Springer.
- Open Compliance and Ethics Group (OCEG). 2009. GRC Capability Model. Red Book 2.0. Retrieved from: https://thegrbluebook.com/wp-content/uploads/2011/12/uploads_OCEG.RedBook2-BASIC.pdf [Accessed 20 August 2014].
- Ostojic, S. & Unkovic, Z. 2011. Insurance and management of political risk exposure in developed economies and Serbia. *South East European Journal of Economics and Business*, 6(2):79-93.
- Paape, L. & Speklé, R.F. 2012. The adoption and design of enterprise risk management practices: An empirical study. *European Accounting Review*, 21(3):533–564.

- Paulk, M.C., Curtis, B., Chrissis, M.B. & Weber, C.V. 1993. Capability Maturity Model for Software, Version 1.1, IEEE Software, retrieved from: <http://www.sei.cmu.edu/library/abstracts/reports/93tr024.cfm> (accessed 21 June 2013).
- Periasamy, P. & Veeraselvam, M. 2013. Risk and insurance management. New Delhi: Vijay Nicole Imprints.
- Pfeffer, I. 1956. Insurance and economic theory. Homewood, IL: Irwin.
- Project Management Institute. 2006. The standard for program management. Washington, DC.
- Public Risk Management Association. 2010. A structured approach to enterprise risk management (ERM) and the requirements of ISO 31000. Retrieved from: https://www.theirm.org/media/886062/ISO3100_doc.pdf [Accessed 2 August 2013].
- PwC. 2008. Enterprise Risk Management (ERM) Benchmarking Survey 2008. Retrieved from: http://www.pwc.com/fi/fin/about/svcs/neuvonta/erm_benchmarking_survey_2008.pdf [Accessed 3 August 2014].
- Qiao, Y. 2007. Public risk management: development and financing. *Journal of Public Budgeting, Accounting & Financial Management*, 19(1):33-55.
- Rahman, R. A., Noor, S. B., & Ismail, T. 2013. Governance and risk management: Empirical evidence from Malaysia and Egypt. *International Journal of Finance & Banking Studies*, 2(3):21-33.
- Raiyani, C. 2012. Research methods. Mumbai: New Century Publications.
- Rasid, S.A. & Rahman, A.A. 2009. Management accounting and risk management practices in financial institutions. Retrieved from: <http://www.penerbit.utm.my/onlinejournal/51/E/JT51EDIS06.pdf> [Accessed 3 August 2014].
- Rastogi, N. & Trivedi, M.K. 2016. Pestle technique – a tool to identify external risks in construction projects. *International Research Journal of Engineering and Technology*, 3(1):384–388.

- RIMS (Risk and Insurance Management Society). 2006. Risk Maturity Model (RMM) for enterprise risk management. Retrieved from:
http://www.logicmanager.com/pdf/rims_rmm_executive_summary.pdf [Accessed 20 November 2015].
- RIMS (Risk and Insurance Management Society). 2011. Why strategic risk management? Retrieved from:
<https://www.rims.org/resources/ERM/Documents/FAQ%20on%20SRM%20and%20ERM%20FINAL%20April%2020%202011.pdf> [Accessed 15 August 2015].
- Sachdeva, J. 2009. Business research methodology. Mumbai: Himalaya.
- Sahoo, S. & Das, S. 2008. Insurance Management. Mumbai: Global Media.
- Saunders, M., Lewis, P. & Thornhill, A. 2009. Research methods for business students. Fifth edition. Essex: Pearson Education.
- Sayers, P.B., Gouldby, S., Meadowscroft, I.C. & Hall, J.W. 2005. Towards risk-based flood hazard management in the UK. In Proceedings of the Institution of Civil Engineers: Civil Engineering, 150:36–42.
- Scor. 2009. Enterprise risk management (ERM): A driving force for the insurance industry. Retrieved from:
https://www.scor.com/PandC_docs/SCOR_FocusERM_102009.pdf [Accessed 2 February 2014].
- Segal, S. 2011. Corporate value of enterprise risk management: The next step in business management. New Jersey: Wiley.
- Sharma, S. K. 2013. Risk management in construction projects using combined analytic hierarchy process and risk map framework. IUP Journal of Operations Management, 12(4):23-53.
- Shortreed, J., Fraser, J., Purdy, G. & Schanfield, A. 2012. The future role of internal audit in enterprise risk management. White paper published on the website of the Manhattanville College. Retrieved from:
www.broadleaf.co.nz/pdfs/articles/Future_Role_of_IA_in_ERM.pdf [Accessed 20 May 2016].
- Simkins, B. & Ramirez, S. 2008. Enterprise wide risk management and corporate governance. Loyola University Chicago Law Journal, 39(3):571–594.

- Singh, Y.K. 2006. Fundamentals of research methodology and statistics. New Delhi: New Age International.
- Smiechewicz, W. 2001. Case study: Implementing enterprise risk management. *Bank Accounting & Finance*, 14(4):21–27.
- Smit, Y. 2012. A structured approach to risk management for South African SMEs Unpublished PhD thesis. Cape Town: Cape Peninsula University of Technology.
- Society of Actuaries. 2001. Risk management practices in the insurance industry. *Record*, 27(2): 1-17.
- S&P (Standard and Poor's). 2007. The role of ERM in ratings. Retrieved from: http://www.ermsymposium.org/2007/pdf/handouts/General%20Sessions/G3_combo.pdf [Accessed 30 June 2016].
- S&P (Standard & Poor's). 2008. Assessing insurers' economic capital models: Discussion on methodology and application. Retrieved from: <http://www.actuaries.org/ASTIN/Colloquia/Manchester/Presentations/Ingram.pdf> [Accessed 12 October 2015].
- St. John's University & Protiviti. 2015. Assessing the results of the 2015 ORSA Survey. The journey to ORSA begins. Retrieved from: https://www.protiviti.com/sites/default/files/united_states/insights/2015-orsa-summary-report-survey-st-johns-protiviti.pdf [Accessed 12 September 2015].
- Swiss Reinsurance Company. 2004. Economic Research & Consulting, Understanding reinsurance. Retrieved from: <http://www.grahambishop.com/DocumentStore/SwissRe%20Understanding%20reinsurance.pdf> [Accessed 13 August 2014].
- Tabachnick, B.G. & Fidell, L.S. 2001. Using multivariate statistics. New York, NY: HarperCollins.
- Taylor, B.J., Kermode, S. & Roberts, K. 2006. Research in nursing and health care: Evidence for practice. Third edition. Sydney: Thomson.
- The MITRE Corporation. 2013. Risk management. Retrieved from <http://www.asq509.org/ht/a/GetDocumentAction/i/79426> [Accessed 3 August 2016].

- Trochim, W.M.K. & Donnelly, J.P. 2008. Research methods knowledge base. Third edition. Washington, DC: Atomic Dog.
- Tummala, R. & Schoenherr, T. 2011. Assessing and managing risks using the supply chain risk management process (SCRMP). *Supply Chain Management: An International Journal*, 16(6):474–483.
- UNEP FI (United Nations Environment Programme – Finance Initiative). 2009. The global state of sustainable insurance: Understanding and integrating environmental, social and governance factors in insurance. Retrieved from: <https://www.cisl.cam.ac.uk/publications/publication-pdfs/the-global-state-of-sustainable-insurance.pdf> [Accessed 12 February 2013].
- Valsamakis, A.C., Vivian, R.W. & Du Toit, G. 2010. Risk management. Pretoria: Pearson Education.
- Valsamakis, A.C., Vivian, R.W., Du Toit, G. & Anton, S.G. 2010. Lessons from the current financial crisis: A risk management approach. Retrieved from: <http://www.rebs.ro/articles/pdfs/37.pdf> [Accessed 4 August 2013].
- Van, G.J. 2009. Improving Operational Risk Management. Amsterdam: IOS Press.
- Van Vuuren, J.L., Reyers, M. & Van Schalkwyk, C.H. 2017. Assessing the impact of solvency assessment and management on risk management in South African insurance companies. *Southern African Business Review*, 21: 129-149.
- Veysey, S. 2008. UK sets standards for risk management. *Business Insurance*, 42(44):25.
- Vickers, A. J. 2003. Underpowering in randomized trials reporting a sample size calculation. *Journal of Clinical Epidemiology*, 56(8):717–720.
- VIG (Vienna Insurance Group). 2015. Challenges of Solvency II reporting in the practice: Viewpoint of a CEE market leader. Paper presented at the “Challenges and Practice of Insurance Supervision in South East Europe” Conference on 7 May 2015. Retrieved from: <http://institutzaosiguranje.hr/UserFiles/file/institut/KONFERENCIJA%20O%20NA%20DZORU/Nadzor%202015/PDF%20prezentacije/09.%20Carsten%20Dehner.pdf> [Accessed 12 June 2014].

- Vijayaragavan, G. 2013. Bank credit management, texts and cases. Mumbai: Himalayan.
- Vyas, M. & Singh, S. 2010. Risk management in the banking sector. *BVIMR Management Edge*, 4(1):15–24.
- Weaver, K. & Olson, J. 2006. Understanding paradigms used for nursing research. *Journal of Advanced Nursing*, 53(4):459–469.
- Wieczorek-Kosmala, M. 2014. Risk management practices from risk maturity models perspective. *JEEMS*, 19(2):133–159.
- Wijeratne, W. M. P. U., Perera, B. A. K. S., & De Silva, L. 2014. Identification and assessment risks in maintenance operations. *Built Environment Project and Asset Management*, 4(4):384-405.
- Williams, A. & Heins, M.H. 1995. Risk management and Insurance. New York, NY: McGraw-Hill.
- Wood, D. 2005. Where we are going: SWOT analysis aids risk assessment. *Oil & Gas Journal*, 103:54-58.
- Yusuwan, N.M., Adnan, H., Omar, A.F. & Jusoff, H.K. 2008. Clients' perspectives of risk management practice in Malaysian construction industry. *Journal of Politics and Law*, 1(3):121–131.

APPENDIX 1: RESEARCH QUESTIONNAIRE

Information to respondent

The Corporate governance Codes have recently put emphasis on Enterprise Risk Management in organisations. It has been further highlighted that organisations must assess their risk maturity levels in order to increase the effectiveness of their risk strategies.

This study will assess the Enterprise Risk Management Maturity Levels of the Insurance Industry in Botswana.

This work is part of a research thesis in partial fulfilment of a Doctor of Administration in degree in Business Management and it is believed that the results of this study will be utilised by the insurance industry, government and current risk management students.

Responses to be collected through this research tool will be treated in the strictest confidence and no company names will be published in the reported statistics and analysis of the survey results. Furthermore no company specific information will be provided to any third parties without the prior written approval of the company involved. Participation in this research study is voluntary, participants are free to participate, not participate or withdraw from participation.

For any clarifications the researcher may be contacted on 75226062.

This questionnaire consists of two sections A and B. Section A captures general demographical information. Section B captures data for assessment of risk maturity level.

Company Information

A.1 What business is the organisation in?

1. Insurance [] 2. Brokerage []

3. Agency [] 4. Other (Please specify) _____

B: Risk Maturity Levels

On a scale of 1-5 (1 being the lowest and 5 being the highest) indicate your rating of each statement by ticking in the appropriate box.

1. Internal environment	1	2	3	4	5
1.1 Employees know about the importance of risk management in the organisation.					
1.2 The board of directors has sufficient knowledge, industry expertise, and time to serve effectively.					
1.3 The board of directors and audit committee are independent from management.					
1.4 Management meetings are held periodically within each function, and senior management attends on a regular basis.					
1.5 Issues pertaining to organisational risks are periodically made part of the management meeting agenda.					
2. Objectives					
2.1 Management has established and communicated the company's mission, strategy, and business objectives to employees and the board of directors.					
2.2 Management establishes and monitors acceptable risk tolerances when setting strategic direction.					
2.3 Resources are sufficient to achieve process level objectives, and if not, plans are in place to acquire them.					
2.4 Employees participate in establishing process level objectives and ultimately own business results for which they are responsible.					
2.5 Interests of stakeholders are accommodated when establishing risk appetite.					
3 Event/Risk Identification					
3.1 Adequate mechanisms exist for identifying business risks					
3.2 There is a mechanism for monitoring changes in the economic and regulatory environment.					
3.3 All employees are involved in the identification of risks					

3.4 Adequate mechanisms are in place to identify and assess threats of failure to comply with external regulations.					
3.5 Formal and/or informal mechanisms exist that anticipate, identify, and respond to routine events or activities that could have an impact on achieving company level or process level objectives.					
4. Risk Assessment					
4.1 Periodic (at least annual) risk assessments are performed by internal audit (or other appropriate group).					
4.2 The board of directors and/or audit committee oversees and monitors the risk assessment process.					
4.3 Management routinely assesses various risks to achieving business objectives.					
4.4 Expertise is used to quantify risks that the organisation faces.					
4.5 The risk severity and frequency is considered in analysing risks.					
5. Risk Response					
5.1 Risk response in the organisation is driven by risk appetite and risk tolerance.					
5.2 The mechanism used to handle risk puts into consideration the trade-off of risk and reward.					
5.3 The response considers the degree to which risk severity and probability will be reduced.					
5.4 Steps to mitigate foreseen risks are determined well in time					
5.5 The organisation strengthens activities that respond to identified risks.					
6. Control Activities					
6.1 Appropriate policies and procedures have been developed and implemented for each major process.					

6.2 Appropriate and timely actions are taken on exceptions to policies and procedures.					
6.3 The audit committee (or other relevant Committee) monitors risk management systems.					
6.4 Performance appraisals adequately address internal control responsibilities and set forth criteria for integrity and ethical behavior.					
6.5 Control activities described in policy and procedure manuals relate clearly to identify risks and internal controls.					
7. Information and Communication					
7.1 Internally generated information critical to achievement of the company's objectives, including that relative to critical success factors, is identified and regularly reported.					
7.2 Information is available on a timely basis to allow effective monitoring of events and activities, internal and external, and prompt reaction to economic and business factors and control issues.					
7.3 Information is communicated effectively up, down and across the organisation.					
7.4 All reported potential improprieties are reviewed, investigated, and resolved in a timely manner.					
7.5 Mechanisms exist for open and effective communication with customers, suppliers, and other external parties regarding information on changing customer needs.					
8 Monitoring					
8.1 Risk levels are monitored in line with the company's risk appetite					
8.2 Personnel responsible for reports are required to sign off on their accuracy and integrity and are held accountable if deficiencies are discovered.					

8.3 Management implements internal control recommendations made by internal and external auditors and corrects known deficiencies on a timely basis.					
8.4 A risk function with competent and experienced staff exists to assist in monitoring activities.					
8.5 The internal audit function has access to the board of directors or audit committee.					

APPENDIX 2: LETTER TO INSURANCE COMPANIES

The Human Resources Manager
GABORONE

Request for permission to conduct research at

Title of research: Assessment of Enterprise Risk Management Maturity Levels of the Insurance Industry in Botswana

Date: November 2015

Contact Person: Moreblessing Ngwenya
BA ISAGO University College
Risk Management, Insurance and Actuarial Science Department
Telephone: 3957744
Cell: 75226062
Email address: moreblessing.ngwenya@baisago.co.bw

Dear Sir/Madam,

I, Moreblessing Ngwenya am doing research with Professor Sam Ngwenya, the Chairperson in the Department of Finance, Risk Management and Banking towards a Doctor of Administration in Business Management at the University of South Africa. We are inviting you to participate in a study entitled Assessment of Enterprise Risk Management Maturity Levels of the Insurance Industry in Botswana.

The aim of the study is to assess Enterprise Risk Management maturity levels of the insurance industry in Botswana and the research process will help to develop an Enterprise Risk Management evaluation scorecard as a tool to assess Enterprise Risk Management maturity levels for insurance organisations.

The study will entail use of a questionnaire to collect data. Data collected will be used only for the purposes of the study and will be kept confidential.

This study will contribute to the area of risk management in general in Botswana as the area has not been researched much. A tool for measuring ERM maturity levels in Botswana will be developed from existing tools and this can be used by other researchers in the country and also in the whole region of Southern Africa. Furthermore the study will contribute to literature on Enterprise Risk Management maturity levels and be a reference for future studies. The findings of the study will assist the insurance industry to understand the concept of ERM as a recommendation by most corporate governance bodies and the insurance organisations will get to know at what level of ERM the sector is in general.

No potential risks pertaining to this study have been identified. A summary report will be given to the Insurance Regulator, Non-Banking Financial Institution Regulatory Authority (NBFIRA) to be made available to each participating organisation.

I look forward to your participation in this research.

Yours sincerely

Moreblessing Ngwenya
Researcher