AN ANALYSIS OF ENTERPRISE RISK MANAGEMENT AND ITS BENEFITS TO BANKS: A CASE OF ECOBANK ZIMBABWE LIMITED.

IN PARTIAL FULFILLMENT OF MASTERS IN BUSINESS ADMINISTRATION. (MBA)-FINANCIAL SERVICES DEGREE

Name of Student | Registration Number
--- | ---
Fungai R Dzirutwe | R106106L
DEDICATION

To my dear my wife, sons (3 Rs) and late father this effort was inspired by you.
DECLARATION

I, Fungai Richard Dzirutwe do hereby declare that this dissertation is the result of my own investigation and research, except to the extent indicated in the Acknowledgements, References and by comments included in the body of the report, and that it has not been submitted in part or in full for any other degree to any other university.

__________________________  ____________
Student signature  Date

Approved for submission

__________________________  ____________
Supervisor's Signature  Date
ACKNOWLEDGEMENTS

I would like to acknowledge the following for making this research a success:

- To the Almighty God, creator of all worldly creatures, I thank you for the strength
- My parents for all they gave me in life
- My family for understanding and lonely endurance
- Rashid Mudala ----for the patience and enlightenment
- Professor Jean Demean for advise rendered
- Jabulani Zimuto and Mike Sabeta for the assistance
- Kudzai Gombera for the ideas shared
- The institution for according me the opportunity to study
- My group members for the encouragement
- Questionnaire respondents for prompt responses
- My dear friend Justin Nhema for the effort and advise
- Lastly Mr Mutasa for understanding the pressures this piece of work
ABSTRACT

The study sought to analyse Enterprise Risk Management (ERM) and its benefits to financial institutions. The study built its foundations on risk management gradually building the case of the existence of ERM today. The discussion touched on aspects of traditional risk, benefits, drivers, and implementation of ERM. Furthermore, empirical cases of attempts to correlate the relationship between ERM and firm performance were given.

The study assumed a quantitative bias, though qualitative techniques were also exploited in the process. The research used the COSO model in analysis of risk.

The study was a case study of Ecobank (2010-2012) deriving mainly from the claim of managing risks using ERM as observed in the annual reports and the positive performance of the bank during that period.

The study's major finding was the existence of a relationship between ERM variable and firm performance. The study also exposed a high level of risk awareness and responsibility within the institution. The findings were a positive build up of evidence supporting other works already done on the subject.

Recommendations put forward include the need to include risk as a performance metric with acceptable weighting to allow risk owners to assume risk befitting their risk-return tradeoffs. The areas of further research proposed include, conducting a study of the effect of culture on ERM in Zimbabwe.
# Table of Contents

**DEDICATION** ............................................................................................................. i

**DECLARATION** .......................................................................................................... ii

**ACKNOWLEDGEMENTS** ............................................................................................... iii

**ABSTRACT** ................................................................................................................... iv

**LIST OF TABLES** .......................................................................................................... viii

**LIST OF FIGURES** ....................................................................................................... ix

**LIST OF ACRONYMS** ................................................................................................. x

**CHAPTER 1: INTRODUCTION** ..................................................................................... 1

1.0 INTRODUCTION TO THE STUDY.............................................................................. 1

1.1 BACKGROUND .......................................................................................................... 2
  1.1.1 ENVIRONMENTAL SCAN ...................................................................................... 3
  1.1.2 INDUSTRY BACKGROUND ................................................................................... 5
  1.1.3 BANKING INDUSTRY DRIVING FORCES ........................................................... 6
  1.1.4 PERFORMANCE OF THE BANKING SECTOR...................................................... 11
  1.1.5 COMPANY BACKGROUND ................................................................................... 13

1.2 RESEARCH PROBLEM .............................................................................................. 16

1.3 RESEARCH OBJECTIVES ........................................................................................ 16

1.4 RESEARCH QUESTIONS ........................................................................................... 17

1.5 RESEARCH PROPOSITION ....................................................................................... 17

1.6 JUSTIFICATION OF RESEARCH ............................................................................ 17

1.7 SCOPE OF RESEARCH ............................................................................................. 18

1.8 LIMITATIONS TO THE STUDY ................................................................................ 18

1.9 RESEARCH OUTLINE ............................................................................................... 18

1.9 CHAPTER SUMMARY ............................................................................................... 19

**CHAPTER 2: LITERATURE REVIEW** .......................................................................... 20

2.0 INTRODUCTION ......................................................................................................... 20

2.1 WHAT IS RISK AND RISK MANAGEMENT? ............................................................ 20
  2.1.1 RISK MANAGEMENT ........................................................................................... 21

2.2 BANK RISKS ............................................................................................................ 23
  2.2.1 FINANCIAL RISKS ............................................................................................... 24
  2.2.2 NON-FINANCIAL BANK RISKS ............................................................................ 30

2.3 The Rise of Enterprise Risk Management (ERM) ...................................................... 31

2.3.1 DEFINING ENTERPRISE RISK MANAGEMENT (ERM) ...................................... 34

2.3.2 ENTERPRISE RISK MANAGEMENT (ERM) AND TRADITIONAL RISK MANAGEMENT (TRM) .................................................. 35

2.3.3 BENEFITS OF ENTERPRISE RISK MANAGEMENT ........................................... 37

2.4 Frameworks (Process) of Enterprise Risk Management (ERM) ............................... 40

2.4.1 COMPONENTS OF COSO FRAMEWORK ................................................................ 41

2.4.2 ENTERPRISE RISK MANAGEMENT (ERM) IMPLEMENTATION ......................... 53

2.4.3 ENTERPRISE RISK MANAGEMENT AND CORPORATE GOVERNANCE ........ 55

2.4.4 ENTERPRISE RISK MANAGEMENT AND FIRM PERFORMANCE .................. 57

2.4.5 FACTORS AFFECTING FIRM PERFORMANCE ................................................... 59
LIST OF TABLES

Table 1.1  Macro-environmental Analysis
Table 1.2  Industry Architecture
Table 1.3  Bank Capital Levels as at 31 December 2012
Table 1.4  Sector Deposit Market Share
Table 1.5  Commercial Banks’ Summary Performance
Table 1.6  SWOT Analyses
Table 1.7  Financial Performance Indicators
Table 2.1  Core Risks
Table 2.2  Banking Risks
Table 2.3  Evolving of Risk Management
Table 2.4  ERM Continuum
Table 2.5  Empirical Benefits of ERM
Table 2.6  Risk Identification Techniques
Table 2.7  Disposition to risks
Table 2.8  Risk Management Three Lines of Defence
Table 4.1  Response Rate
Table 4.2  Level of Employment
Table 4.3  Cronbach’s Alpha Test
Table 4.4  Other Risk Cultural Facets
Table 4.5  Intranet Information System Support
Table 4.6  Methods of Risk Treatment
Table 4.7  Do you think risk management has benefits
Table 4.8  Final Rotated Component Matrix
Table 4.9  Spearman's Rho Coefficient Matrix
Table 4.10 Regression Analysis
LIST OF FIGURES

Figure 1.1 Deposits, Loans and Advances
Figure 1.2 Research outline
Figure 2.1 Drivers of ERM
Figure 2.2 Risk Management Perspective
Figure 2.3 COSO ERM FRAMEWORK
Figure 2.4 Categories of risk control decisions
Figure 2.5 Conceptual framework
Figure 4.1 Respondent Qualification
Figure 4.2 Employment length
Figure 4.3 Department of work
Figure 4.4 Bank Risks
Figure 4.5 Department Specific Risks
Figure 4.6 Methods of Risk identification
Figure 4.7 Risk Assessment
Figure 4.8 Risk Assessment attitudes
Figure 4.9 Existence of risk culture
Figure 4.10 Attitudes on Communication
Figure 4.11 System connectivity
Figure 4.12 Types of Risk Control
Figure 4.13 Managing Risks
Figure 4.14 Responsibility for Risk
Figure 4.15 The board has a role in risk management
Figure 4.16 Responsibility for Risk Monitoring
Figure 4.17 ERM effectiveness
Figure 4.18 ERM Increases the Performance of the Bank
**LIST OF ACRONYMS**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMA</td>
<td>Advanced Measurement Approach</td>
</tr>
<tr>
<td>BIS</td>
<td>Bank of International Settlements</td>
</tr>
<tr>
<td>BODIND</td>
<td>Board Independence</td>
</tr>
<tr>
<td>BODS</td>
<td>Board Size</td>
</tr>
<tr>
<td>BURC</td>
<td>Business Unit Risk Committee</td>
</tr>
<tr>
<td>CAS</td>
<td>The Casualty Actuarial Society</td>
</tr>
<tr>
<td>CDS</td>
<td>Credit Default Swaps</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>CFO</td>
<td>Chief Finance Officer</td>
</tr>
<tr>
<td>COSO</td>
<td>THE COMMITTEE OF SPONSORING ORGANIZATIONS</td>
</tr>
<tr>
<td>CRO</td>
<td>Chief Risk Officer</td>
</tr>
<tr>
<td>CRQ</td>
<td>Credit Quality</td>
</tr>
<tr>
<td>DIVINC</td>
<td>Diversification Income</td>
</tr>
<tr>
<td>ERM</td>
<td>Enterprise Risk Management</td>
</tr>
<tr>
<td>EWRM</td>
<td>Enterprise-Wide Risk Management</td>
</tr>
<tr>
<td>ETI</td>
<td>Ecobank Transnational International</td>
</tr>
<tr>
<td>EWF</td>
<td>European Federation of Welding, Joining and Cutting</td>
</tr>
<tr>
<td>EZW</td>
<td>Ecobank Zimbabwe</td>
</tr>
<tr>
<td>FEXP</td>
<td>Financial Experience of the Board</td>
</tr>
<tr>
<td>FP</td>
<td>Firm Performance</td>
</tr>
<tr>
<td>GNU</td>
<td>Government of National Unity</td>
</tr>
<tr>
<td>HOR</td>
<td>Head of Risk</td>
</tr>
<tr>
<td>IMA</td>
<td>Institute of Management Accountants</td>
</tr>
<tr>
<td>IRM</td>
<td>Institute of Risk Management</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
</tr>
<tr>
<td>LEV</td>
<td>Leverage</td>
</tr>
<tr>
<td>RBZ</td>
<td>Reserve Bank of Zimbabwe</td>
</tr>
<tr>
<td>RAROC</td>
<td>Risk Adjusted Return on Capital</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on Assets</td>
</tr>
<tr>
<td>ROE</td>
<td>Return on Equity</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>S &amp; P</td>
<td>Standard and Poors</td>
</tr>
<tr>
<td>SCOR</td>
<td>Supply Chain Operations Reference</td>
</tr>
<tr>
<td>VaR</td>
<td>Value at Risk</td>
</tr>
</tbody>
</table>
CHAPTER 1: INTRODUCTION

1.0 INTRODUCTION TO THE STUDY

Risk and risk management have evolved over time and led to the realization that risks are interdependent and their management should be integrated (Dickinson, 2001). This gave birth to a new framework of risk management termed Enterprise Risk Management (ERM). The concept tries to bridge the management of risks in silos to an integrated approach. Bank risks such as market, credit, liquidity and operational risk have tended to gain attention from regulatory and international guidelines such as the Basel II Accord (2004). Other risks that have not received such prominence, for example political risk, have also paused as threats to company performance. Organisations have thus realized the need to implement ERM as a solution to cover for unexpected surprises.

The COSO (2004) guideline and the ISO31000(2009) have become the guiding frameworks of implementing ERM. The methods of implementation differ across industries but general results have shown that there are benefits from ERM implementation (KPMG, 2001). Such benefits have included value creation, enhanced reputation, competitive advantage and reduced costs. Company performance means positive change to the key parameters guiding success. The increase in balance sheet, profitability, returns on assets and increase in share price are some of the indicators used.

This research aims at making an analysis of ERM adoption to the performance of Ecobank Zimbabwe. It seeks to unravel the concept of ERM, its implementation and the application, and challenges of adopting the COSO framework to the chosen company. The research will also draw conclusions as to whether ERM is beneficial as well as recommending best ways of improving its effectiveness.
1.1 BACKGROUND

The global financial crisis exposed flaws in the risk management frameworks of financial institutions which are primarily rooted in models (Hawkins, 2012). These models have been criticised for failing to encompass the "black swan" events that usually render the risk management models unusable when they occur. Examples of such events include the "dot.com bubble burst", the stock market crush as well as the recent global financial crisis in the world at large; while in Zimbabwe the black Friday in November 1997 remains vivid in the history of the investors and banking institutions. Risk management models failed to cover such outlier events leading to new thinking in the field of managing risk; enterprise-wide risk management (ERM).

Since 2003, several banking institutions went into receivership and reasons proffered had been failure in risk management systems as well as corporate governance. Risk management and corporate governance are inseparably intertwined (Manab, et al., 2010). In addition, the multi-currency regime of 2009 in Zimbabwe, came at a time when the global liquidity was dwindling due mainly to the global credit crunch. The Zimbabwean situation was exacerbated due to almost a decade of economic meltdown that wiped off the savings buffer of major economic agents such as pension funds and households. Therefore, competition for banking business gradually built up. The quest to perform in different conditions which included but not limited to; the absence of own currency, low liquidity, low savings, depressed customer confidence and no lender of last resort; made risk management an important competitive driver. However, not only did banks needed to manage risk but to view it holistically through the concept of ERM. The RBZ implored on banks to use ERM as a vital risk management tool in its December 2011 monetary policy. This derived from the world trend where the mutation of risks had been observed during the global credit crisis. ERM therefore became a new model of risk management which banks became focused on and has also received recognition from the Basel II Accord of 2004. In Zimbabwe not much had been known about this concept in practice. This study, thus, seeks to explore ERM as being applied in the country making valuable addition to the body of knowledge.
1.1.1 ENVIRONMENTAL SCAN

The environment within which the organisation thrives, shapes and reshapes its business model as forces of change continue to introduce complexity (Mutowo, 2012). The Zimbabwean economy went through a myriad of changes since the introduction of the multicurrency regime, which coincided with the ushering in of the Government of National Unity (GNU). The economy has benefited from the stability of the foreign currencies in use and low inflation. This culminated in significant growth rates (-19% in 2008 to 5% in 2012) well above world rates (World Bank, 2013).

The world economies have also suffered from the crisis in the euro zone albeit benefiting from continued Chinese support. Of significance is the Cyprus crisis that ushered in a new "euro-model" of austerity measures albeit being rejected by the Cypriot parliament.

The simmering tensions between the United States of America and North Korea that threatens to expose the world to nuclear war, form part of the world politics. In Africa the threat of banditry acts in Mozambique, the war in Mali and Democratic Republic of Congo and the continued coups such as one in Central African Republic form political innuendoes that every organisation cannot ignore.

Table 1.1: Macro-environmental Analysis

<table>
<thead>
<tr>
<th>Politically</th>
<th>Socially</th>
<th>Spiritually</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Elections &amp; possible regime/policy changes</td>
<td>• The increasing Diaspora Population</td>
<td>• Growth in charismatic churches</td>
</tr>
<tr>
<td>• Leadership changes in Kenya,</td>
<td>• HIV Prevalence</td>
<td>• Growth in ‘prosperity teaching’/Business forum</td>
</tr>
<tr>
<td>• Threats of violent engagements between Iran and North Korea against the USA</td>
<td>• Age structure – Young Population</td>
<td>• Moslems embracing market economics</td>
</tr>
<tr>
<td>• Unpredictable outcome</td>
<td>• Improving health conditions</td>
<td>• continued conflict between christians and moslems</td>
</tr>
<tr>
<td>• Erosion of trust and confidence</td>
<td>• Disappearance of work culture – poor work ethics</td>
<td>• the rise of foretelling and miracle crusade</td>
</tr>
<tr>
<td>• Dissolution of the GNU</td>
<td>• High unemployment and increasing poverty (85%)</td>
<td>•</td>
</tr>
<tr>
<td>• the referendum success and new constitution</td>
<td>• Labour migration</td>
<td>•</td>
</tr>
<tr>
<td></td>
<td>• Reduction in the use of</td>
<td>•</td>
</tr>
</tbody>
</table>
| banks as investment and savings vehicles;  
| Static bankable population |

<table>
<thead>
<tr>
<th><strong>Economically</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Suboptimum capacity utilization (40%)</td>
</tr>
<tr>
<td>• Declining discretionary income</td>
</tr>
<tr>
<td>• Decreasing inflation since GNU formation and multicurrency regime</td>
</tr>
<tr>
<td>• Limited scope for Money Supply growth</td>
</tr>
<tr>
<td>• High budget deficit and government default on external loans</td>
</tr>
<tr>
<td>• Exchange rate risk</td>
</tr>
<tr>
<td>• Weakening of the USD)</td>
</tr>
<tr>
<td>• High lending interest rates</td>
</tr>
<tr>
<td>• Integration &amp; Contagion effects</td>
</tr>
<tr>
<td>• Government expenditure</td>
</tr>
<tr>
<td>• Low profit margins</td>
</tr>
<tr>
<td>• Increasing operating costs</td>
</tr>
<tr>
<td>• Poor performance of exports</td>
</tr>
<tr>
<td>• Weakening Balance of Payments (BOP)</td>
</tr>
<tr>
<td>• Power shortages</td>
</tr>
<tr>
<td>• Erosion of investor confidence</td>
</tr>
<tr>
<td>• Taxation (individuals – high taxation, VAT on Stockbrokers)</td>
</tr>
<tr>
<td>• Aging capital equipment/Production scale down</td>
</tr>
<tr>
<td>• Lack of credit lines</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Legally</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Banking Act amendments</td>
</tr>
<tr>
<td>• Companies Act</td>
</tr>
<tr>
<td>• Indigenization and Empowerment Act (51%)</td>
</tr>
<tr>
<td>• Securities Act</td>
</tr>
<tr>
<td>• Stock Exchange Act amendment</td>
</tr>
<tr>
<td>• Changing Tax Statutes</td>
</tr>
<tr>
<td>• Demutualization and listing of ZSE</td>
</tr>
<tr>
<td>• Establishment of alternate exchange</td>
</tr>
<tr>
<td>• Volatile regulatory environment.</td>
</tr>
<tr>
<td>• the possible establishment of commodities exchange</td>
</tr>
<tr>
<td>• the new capital requirements for banks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Environmentally</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establishment of Environmental Agency;</td>
</tr>
<tr>
<td>• Banning of certain types of plastics</td>
</tr>
<tr>
<td>• the banning of firewood sales to preserve forests</td>
</tr>
<tr>
<td>• the threat of the El-nino condition</td>
</tr>
<tr>
<td>• global warming</td>
</tr>
</tbody>
</table>
1.1.2 INDUSTRY BACKGROUND

The company being researched on operates in the financial or banking services industry and is regulated by the Reserve Bank of Zimbabwe (RBZ). The activities of this industry are guided by the Banking Act chapter 22:05. The industry architecture as at January 2013 was as shown below:

<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Banks</td>
<td>16</td>
</tr>
<tr>
<td>Building Societies</td>
<td>3</td>
</tr>
<tr>
<td>Merchant Banks</td>
<td>2</td>
</tr>
<tr>
<td>Savings Bank</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Banking Institutions</strong></td>
<td><strong>22</strong></td>
</tr>
<tr>
<td>Asset Management Companies</td>
<td>16</td>
</tr>
<tr>
<td>Microfinance Institutions</td>
<td>150</td>
</tr>
</tbody>
</table>

Source: RBZ Monetary Policy (2013)
Following the dollarisation of the Zimbabwean economy, at the beginning 2009, there has been a shift in the structure of the banking sector. Commercial banks have decreased by two since 2009 following the surrender and cancellation of banking licence of Royal and Barbican Bank. Interfin Bank was placed under curatorship in 2011. On the other hand, the decreasing scope in the economy led to the conversion of one merchant bank (Premier Bank) into a commercial bank while Genesis Investment Bank was placed into liquidation.

The new multicurrency regime, credited for stabilising the economy, has made banks grapple with liquidity challenges that have decreased their lending capacity. This has led to the proliferation of microfinance companies that stood at 150 in number as at 31 December 2013.

1.1.3 BANKING INDUSTRY DRIVING FORCES

Industry driving forces represent those factors that puts pressure of change on an organisation (Mutowo, 2012). The banking industry went through metamorphosis since the historic monetary policy of 2003 that reigned in errant financial institutions and claimed the scalp of some financial institutions. Among those that fell through was Trust Bank, Barbican Bank, Royal Bank and Time Bank as well as asset management companies. The reason for the above transformation rests with the impact enforced by forces of change within the banking industry. The driving forces within the Zimbabwean banking industry could thus be noted as follows:

- technological innovation
- capitalisation
- the new banking customer
- liquidity
- continuously evolving risk management models
1.1.3.1 Technology and Infrastructure

The technological revolution in banking has proffered new banking models world wide. According to Kearney (2009), in countries with high broadband internet penetration, internet/online banking is used by about 80% of customers. The areas of account opening, mandate management, clearing and settlement are viewed as some areas that still require full technological enhancement. The banking industry had many technological breakthroughs that have provided convenience to customers as well as keeping up with world trends. Some technological driven products include online/internet banking, e-alerts, sms alerts as well as mobile banking. The growing interconnectivity between the country and the world through fibre optic became a notable driving force that any financial institution cannot afford to ignore. On the other hand technology has also made it possible for non-banking institutions to offer banking facilities. An example of this, is the Ecocash platform offered by a mobile telecoms operator, Econet.

1.1.3.2 Capitalisation

The capital of a bank represents the safety cushion that limits risk and unexpected losses (amazonaws.com, 2008). Bank capitalisation is a critical pointer to the stability or otherwise of any financial institution. The history of the Zimbabwean banking industry is littered with memories of losses suffered by depositors as a result of banks going into receivership. In its 2013 monetary policy, the central bank mentioned undercapitalisation as one of the reasons why Royal Bank had been placed into liquidation. Capitalisation of financial institutions has become a public concern and the following was the state of affairs as at 31 December 2012:
Table 1.3  Bank Capital Levels as at 31 December 2012

<table>
<thead>
<tr>
<th>BANK</th>
<th>CAPITALISATION LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBZ</td>
<td>$111.79 million</td>
</tr>
<tr>
<td>Standard Chartered Bank</td>
<td>$56.50 million</td>
</tr>
<tr>
<td>Stanbic Bank</td>
<td>$45.60 million</td>
</tr>
<tr>
<td>Banca ABC</td>
<td>$38.42 million</td>
</tr>
<tr>
<td>Barclays Bank</td>
<td>$34.30 million</td>
</tr>
<tr>
<td>ZB Bank</td>
<td>$32.34 million</td>
</tr>
<tr>
<td>Kingdom Bank</td>
<td>$28.79 million</td>
</tr>
<tr>
<td>Ecobank Zimbabwe</td>
<td>$28.18 million</td>
</tr>
<tr>
<td>FBC Bank</td>
<td>$27.97 million</td>
</tr>
<tr>
<td>MBCA Bank</td>
<td>$27.14 million</td>
</tr>
<tr>
<td>TN Bank</td>
<td>$26.90 million</td>
</tr>
<tr>
<td>CABS</td>
<td>$26.19 million</td>
</tr>
<tr>
<td>Tetrad</td>
<td>$25.19 million</td>
</tr>
<tr>
<td>NMB Bank</td>
<td>$25.01 million</td>
</tr>
<tr>
<td>Agribank</td>
<td>$22.64 million</td>
</tr>
<tr>
<td>FBC Building Society</td>
<td>$18.97 million</td>
</tr>
<tr>
<td>Trust Bank</td>
<td>$18.70 million</td>
</tr>
<tr>
<td>Met Bank</td>
<td>$17.70 million</td>
</tr>
<tr>
<td>ZB Building Society</td>
<td>$14.56 million</td>
</tr>
<tr>
<td>ZABG</td>
<td>$15.80 million</td>
</tr>
<tr>
<td>Capital Bank</td>
<td>$7.50 million</td>
</tr>
</tbody>
</table>

Source: RBZ Monetary Policy January 2013

Banks were supposed to meet $25m of the staggered $100m capital required by Reserve Bank of Zimbabwe (RBZ) by the end of year 2012. Capitalisation thus became a driver of change in the banking industry as it sought to influence the following:

- instilling depositors’ confidence
• reduce the number of players through mergers and acquisition
• as a check to bank’s risk taking behaviour
• instilling responsibility and accountability in management of banking institutions

1.1.3.3 The New Banking Customer

The banking crisis that befell the industry in the past decade put a dent on public confidence about banking institutions. This compelled banks to relearn and foster new ways to communicate offers in order to regain customer confidence (Kearney, 2009). The technological revolution that swept across the country pointed to the development of the enlightened customer with increased craving to go virtual. This entailed the evolution of new banking models that trend and continue to anticipate the demographic, social and technological changes in the life of the new banking customer.

1.1.3.4 Liquidity

Liquidity in the banking sector has been at the ebb since dollarisation of the economy in 2009. Nikolaou (2009) distinguishes between the general types of liquidity citing three types of liquidity which are market (interbank and instrument), balance sheet (funding) and central bank liquidity. Central bank liquidity denotes the activities undertaken by the central bank to enhance the liquidity in the financial system. Funding or balance sheet liquidity refers to the ability of a financial institution to meet its day to day liabilities as they fall due (BIS, 2008). Lastly, market liquidity is the ability to trade in securities at any given time without affecting the value of the security and at low cost (Nikolaou, 2009). Using the level of deposits in banks as a proxy for liquidity, it can be seen that liquidity has improved from $900million since end of 2009 to $4.411billion by end of 2012. The distribution of deposits and loans since the multi currency regime of 2009 is depicted in Figure 1.1 below:
As depicted in Figure 1, there has been year on year growth in deposits and corresponding loans and advances in the banking sector. The significance of growth in deposits is that; banks were able to lend more in fulfillment of their financial intermediation and risk sharing functions. Banking institutions that attracted more deposits were also in the better place to grow profitably. Lack of liquidity hampers the capacity of banking institutions to perform their functions fully. The central bank provides an appropriate case study where they are unable to fulfill the lender of last resort function to banking institutions, a function that is critical in alleviating short term liquidity challenges in the sector. Therefore, liquidity can be viewed as a driving force to the performance and sustenance of the banking industry in Zimbabwe.

1.1.3.5 Risk Management Revolution

Blommestein (2006), notes that risk management has become a key driver of the evolving banking architecture, strategy and business models of banks. The global financial crisis was partly blamed on risk management models that failed to cover shadow banking and intricate products in the mould of credit default swaps (CDS).
to this, among other factors, the banking sector has undergone rigorous transformation worldwide in all facets of bank risk management. More formal and thorough techniques in areas of credit, market and operational risk were devised and employed. Stakeholders such as customers, shareholders, regulatory supervisors and creditors have all become concerned parties in the risk management profile of the bank. This, thus, made risk management a driver of change in the financial services sector.

1.1.3.6 Politics and Regulation

"All risk is political" (Hawkins, 2012). The political and regulatory framework in a country provides the direction which industry should take. Changes in the political landscape provide an inevitable change in industry, its structure and activities. In 2003, Bureau de changes were banned while asset management companies were forced to re-register. In addition, banks were forced to reconstitute their boards with distinct separation of ownership and management. The Indegenisation and Empowerment Act became the latest piece of legislation that mandated banks to have a shareholding structure of 51% indigenous shareholders and 49% foreign ownership. Furthermore, the capitalisation levels alluded to earlier on forced other banks to close shop and some muting mergers. This and other examples, points to the fact that politics has been a major driver in influencing changes in the banking industry.

1.1.4 PERFORMANCE OF THE BANKING SECTOR

The continuously changing patterns in the banking services have seen the vanishing of other models of financial institutions. The merchant banks, finance houses and building societies have decreased in prominence hence the growing thrust in conversion to commercial banking (CABS and Tetrad). The reason might lie in the dominance imposed by commercial banking in terms of performance. However, it will be noteworthy to mention that the top five commercial banks namely CBZ Bank, BANCABC, Standard Chartered Bank, Stanbic and Barclays contributed 74% of total commercial bank deposits while CABS held 90% of the deposits in the building society sector. Table 1.4 below summarises the market share in terms of deposits:
Table 1.4 Sector Deposit Market Share

<table>
<thead>
<tr>
<th>Sector</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Banks</td>
<td>89%</td>
<td>89%</td>
<td>88%</td>
</tr>
<tr>
<td>Building Societies</td>
<td>6%</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: Reporting Banks’ FY Financials

Whilst the multicurrency regime brought in stability in the financial services industry and the economy as a whole, banks have struggled due to low margins and high cost of funds. The competition for deposits has been intense with most clients opting to bank with those institutions that they perceived to be strong (flight to quality). Profitability increased, with deposit rich institutions posting good profits while other institutions fought to breakeven. Table 1.5 summarises the performance of commercial banking institutions in terms of total assets, profitability, deposits and customer advances.

Table 1.5: Commercial Banks’ Summary Performance

<table>
<thead>
<tr>
<th></th>
<th>Commercial Banks : 2012 Industry % Share</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Profitability</td>
</tr>
<tr>
<td>CBZ</td>
<td>30%</td>
</tr>
<tr>
<td>Standard Chartered</td>
<td>17%</td>
</tr>
<tr>
<td>Stanbic</td>
<td>17%</td>
</tr>
<tr>
<td>BancABC</td>
<td>13%</td>
</tr>
<tr>
<td>NMB</td>
<td>7%</td>
</tr>
<tr>
<td>FBC</td>
<td>7%</td>
</tr>
<tr>
<td>ZB</td>
<td>5%</td>
</tr>
<tr>
<td>Bank</td>
<td>Growth</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
</tr>
<tr>
<td>MBCA</td>
<td>5%</td>
</tr>
<tr>
<td>Barclays</td>
<td>2%</td>
</tr>
<tr>
<td>Met Bank</td>
<td>2%</td>
</tr>
<tr>
<td>Kingdom</td>
<td>1%</td>
</tr>
<tr>
<td>Ecobank</td>
<td>0%</td>
</tr>
<tr>
<td>Agribank</td>
<td>-5%</td>
</tr>
</tbody>
</table>

Source: Reporting Banks’ FY 2012 Financials

1.1.5 COMPANY BACKGROUND

The company under study is Ecobank Zimbabwe (EZW), part of Ecobank Transnational International (ETI) a Pan African Financial holdings company with affiliates in 35 African countries and headquartered in Togo (www.ecobank.com). Ecobank Zimbabwe (EZW) is owned 68.16% by ETI, 31.22% by Brainworks, a local advisory services arm and 0.61% by an employee share ownership trust. Ecobank also has affiliates in France as well as representative offices in Dubai, London and China. The company's entry into Zimbabwe was a result of the acquisition of Premier Banking Corporation a subsidiary of Premier Finance Group in 2010.

The group’s vision, which is transcended across all affiliates, is to build a world class pan-African bank and to contribute to the economic and financial integration and the development of the African continent (www.ecobank.com). Three business segments that deliver value to customers are Corporate Bank, Domestic Bank and Ecobank Capital which are supported by the groups' IT subsidiary e-process.
### 1.1.5.1 Ecobank Zimbabwe's (EZW) SWOT Analysis

#### Table 1.6: SWOT Analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibrant in-house training facilities</td>
<td>Cultural differences</td>
<td>The growing informal sector</td>
<td>Decreasing quality in credit customers</td>
</tr>
<tr>
<td>Branch network in most of the major Cities</td>
<td>Low brand awareness</td>
<td>Unbanked population in the country and region</td>
<td>The growing competition from non-financial institutions</td>
</tr>
<tr>
<td>Robust IT system and resources</td>
<td>Relatively small capital base</td>
<td>The stability and growth of the economy</td>
<td>Liquidity challenges and possible banking crisis</td>
</tr>
<tr>
<td>Resourceful shareholders</td>
<td>Customer perception about Nigerian link</td>
<td>Government and parastatal business</td>
<td>Political instability</td>
</tr>
<tr>
<td>Varied and dynamic product packages</td>
<td>Too much centralisation</td>
<td>Correspondent banking opportunities</td>
<td>Indigenization and empowerment legislation</td>
</tr>
<tr>
<td>Qualified executives</td>
<td>Relatively small capital base</td>
<td>The use of the multi currencies</td>
<td>Entrants of new players.</td>
</tr>
<tr>
<td>Strong brand with international links</td>
<td></td>
<td>Stability in interest rates</td>
<td>The growing knowledge of the customer</td>
</tr>
<tr>
<td>Experienced and dynamic staff</td>
<td></td>
<td>Thrust for development of emerging markets</td>
<td>Low household savings</td>
</tr>
<tr>
<td>Strong regional footprint</td>
<td></td>
<td></td>
<td>Shrinking customer base due to unemployment</td>
</tr>
</tbody>
</table>
1.1.5.2 Company Performance

Key Performance Indicators

Table 1.7: Financial Performance Indicators

<table>
<thead>
<tr>
<th></th>
<th>Full Year Dec 2010 (000)</th>
<th>Full Year Dec 2011 (000)</th>
<th>Full Year Dec 2012 (000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Earnings</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Interest Income</td>
<td>(478)</td>
<td>2 650</td>
<td>5 282</td>
</tr>
<tr>
<td>Non Interest Income</td>
<td>2 288</td>
<td>1 922</td>
<td>7 408</td>
</tr>
<tr>
<td>Total Income</td>
<td>1 810</td>
<td>4 572</td>
<td>12 690</td>
</tr>
<tr>
<td>After Tax Profit/Loss</td>
<td>(6 778)</td>
<td>(5 873)</td>
<td>306</td>
</tr>
<tr>
<td>Return on Capital</td>
<td>(61.93%)</td>
<td>(76.52%)</td>
<td>0.97%</td>
</tr>
<tr>
<td><strong>Loans &amp; Deposits</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans and Advances</td>
<td>25 362</td>
<td>36 974</td>
<td>81 733</td>
</tr>
<tr>
<td>Deposits</td>
<td>41 471</td>
<td>45 640</td>
<td>71 434</td>
</tr>
<tr>
<td>Loans to Deposits Ratio</td>
<td>61.66%</td>
<td>81.01%</td>
<td>114.42%</td>
</tr>
<tr>
<td>Impairment charge for the period</td>
<td>(1 608)</td>
<td>(3 513)</td>
<td>(1 292)</td>
</tr>
<tr>
<td>Allowance for Impairment</td>
<td>1 708</td>
<td>5 698</td>
<td>7 345</td>
</tr>
<tr>
<td>Allowance impairment as a % of loans</td>
<td>6.73%</td>
<td>15.41%</td>
<td>8.99%</td>
</tr>
<tr>
<td><strong>Capitalisation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 1 Capital</td>
<td>9 724</td>
<td>5 031</td>
<td>28 025</td>
</tr>
<tr>
<td>Tier 2 Capital</td>
<td>718</td>
<td>2 516</td>
<td>2 317</td>
</tr>
<tr>
<td>Tier 3 Capital</td>
<td>503</td>
<td>128</td>
<td>1 353</td>
</tr>
<tr>
<td>Total Regulatory Capital</td>
<td>10 945</td>
<td>7 675</td>
<td>31 695</td>
</tr>
<tr>
<td>Total Risk Weighted Assets</td>
<td>39 109</td>
<td>50 919</td>
<td>111 833</td>
</tr>
<tr>
<td>Total Regulatory Capital Ratio</td>
<td>27.99%</td>
<td>15.07%</td>
<td>28.34%</td>
</tr>
<tr>
<td>Tier 1 Capital Ratio</td>
<td>24.86%</td>
<td>9.88%</td>
<td>25.06%</td>
</tr>
</tbody>
</table>

The above financial indicators show a sustained improvement, using 2010 as the reference period. Notable among these figures is the profit after tax, the return on capital or equity (ROE) and the capitalisation levels. Of importance is the compliance to the capital level requirements set by the central bank at the end of 2012.

1.2 RESEARCH PROBLEM

Prior to the acquisition of Premier Bank by Ecobank, the bank’s performance had been on a downward trend with several changes in boards and executive management. Staff turnover was high while the bank received unwarranted media coverage for the wrong reasons. The bank also suffered from regulatory and compliancy penalties. This painted a picture of a bank where risk management was being implemented in silos without due regard to the overlaps that exist across the different types of risks. Consequently the financial performance of the bank took a nosedive, prompting a search for new investors.

The acquisition by Ecobank ushered in a new dimension of viewing risk management holistically by adopting Enterprise-wide risk management (ERM) as reported in the annual reports. Performance of the bank has since shown tremendous improvement. As a result, the researcher seeks to analyse ERM with a view to establish its linkages with performance. Studies conducted have had mixed results with some authors affirming the effectiveness of ERM while others could not prove that the performance of certain entities have been due to the adoption of ERM.

1.3 RESEARCH OBJECTIVES

The objectives of the research are as follows:

i. to identify the different risks that ERM seeks to address in the bank
ii. to analyse how the different risks are being managed
iii. to analyse the factors that affect the success of ERM
iv. to determine the relationship between ERM and bank performance
v. to make recommendations on how ERM implementation can be improved.
1.4 RESEARCH QUESTIONS

The following research questions will guide the research into the ERM practice at EZW:

i. What are the risks the bank faces as identified through ERM?
ii. How are these risks being managed?
iii. What factors affect ERM and how do they interact in its implementation?
iv. Is there a relationship between ERM and performance measures used in the bank?
v. What recommendations can be put forward to improve ERM?

1.5 RESEARCH PROPOSITION

The research proposes that:

“Enterprise-wide risk management adoption leads to improved company performance”

1.6 JUSTIFICATION OF RESEARCH

The research will be of significance to different stakeholders as follows:

i. The company and other organisations: the company will be able to gauge the level of risk awareness within its employees and might choose to implement the research recommendations to better company performance. To other organisations, the research will represent a proxy of guidance to their ERM programmes.

ii. The regulatory authority: ERM encompasses compliance to regulation and hence the research will provide an independent reference point to management of risk within banks.

iii. The researcher and academic world: the researcher will gain valuable insights from a different angle of risk management to augment to his valuable banking experience and hopes to add to the body of knowledge. The academic world will benefit from the valuable diverse literature as applied in a real organisation.
1.7 SCOPE OF RESEARCH

The research is case study of Ecobank Zimbabwe (EZWP) for the period 2010 to 2012. The study will focus on the financial performance and other relevant positives since the establishment of EZW. The research will also make brief industry comparisons as performance indicators where necessary but will not touch on competitors and agents of the bank.

1.8 LIMITATIONS TO THE STUDY

- The researcher had some difficulties in conducting unstructured interviews with some executives in risk management.
- The observations for calculating the relationship between ERM and performance were few; hence it affected the reliability of the results and the model.
- The regression model might be applicable to the case under study only and not beyond due to non-normality of data.

1.9 RESEARCH OUTLINE

The dissertation would be structured as in figure 1.2 below:

![Fig 1.2: Research outline](image-url)
1.9 CHAPTER SUMMARY

Risk will forever be inextricably connected to banking and general business. Banks cannot run away from risk due to environmental and internal conditions. Traditional models of risk management have suffered major setbacks due to rigidity in assumptions and focus on individual risks rather than adopting a portfolio approach to risk management. The failure of risk management was manifested in the collapse of major corporates due to the global financial crisis and bubble bursts. Enterprise risk management (ERM) thus became a point of focus due to the emphasis it places on managing the organisational risks holistically and not in isolation. ERM looks at the various aspects of risk such as compliance, corporate governance, organisation structure and individual risks as a portfolio of risks that should be managed together. ERM can thus be a competitive enhancer and performance booster as measured through profitability, compliance and liquidity ratios. However, not much is known about this concept in Zimbabwe and the study thus will be an addition to the body of knowledge from the local perspective.
CHAPTER 2: LITERATURE REVIEW

2.0 INTRODUCTION

Any research will never be complete without reviewing literature. Literature on the research subject ensures the researcher is exposed to more salient concepts and intrigues surrounding the subject matter. This chapter reviews the history, need, trends, measurements and arguments put forward by different scholars in the field of risk management that led to the rise of the concept of Enterprise Risk management (ERM). The reviewed literature aids to direct the study towards knowledge addition, especially as application of ERM concepts is narrowed to a single case study.

2.1 WHAT IS RISK AND RISK MANAGEMENT?

Several definitions for risk have been put forward by different authors. According to Skipper (1998), there is no universal definition of risk that exists. ISO (2009), King II Report (2002), COSO (2004), and Naidoo (2002) define risk in terms of the effect of uncertainty on objectives. This is also shared by Svatá & Fleischmann (2011) who seem to concur with the latter definition as they went further to point out that such uncertainty of an event occurring could have a negative or positive effect on outcomes. COSO (2004), posits that such uncertainty provides both opportunity and risk that could erode or enhance organisational value. (Tapiero, 2004) refer to it as uncertainty of outcomes. Economists and statisticians commonly refer to risk as variability in outcomes. This seems to agree with the finance explanation which pitched risk as the probability that actual return on an investment deviates from the expected. Such deviation is statistically measured using the standard deviation for which the formula is represented as below:
\[ \sigma^2 = \sum (R_j - E(R))^2 \cdot P_j \]

where \( R_j \) is the possible outcome and \( E(R) \) is the expected return while \( P_j \) is the probability of possible outcome \( j \) (Clark and Mairos, 1996 as cited by Ferkolj, 2010).

In Strategic Management, risk refers to the negative variations in revenues, cashflows, costs, profits and share of the market. Risk, in this instance, is thus associated with negative outcomes (Ferkolj, 2010).

Volsamakis, Vivian and du Toit (2005) as cited by Makoro (2008), who also define risk as the variation of outcomes (actual) from expected outcomes, conclude that, whichever definition is used, the following underlying themes do exist:

- that uncertainty surrounds the outcomes and decision making is made out of this and a prediction of expected outcome. If there was no uncertainty, decision makers would know the exact outcome of events and hence there would be no risk.
- that the level of risk is determined by the degree of uncertainty. The greater the expected deviation from expected outcomes, the greater the risk and vice-versa.

Of significance to the concept of risk is the existence of company objectives. IRM (2010) thus concludes that these objectives should be comprehensive and fully stated.

### 2.1.1 RISK MANAGEMENT

EWF (2008:p4) defines risk management as "a group of actions that are integrated within the wider context of the organisation, which are directed towards assessing and measuring possible risk situations as well as elaborating the strategies necessary for managing them". Barton et al (2002) as cited by Makoro (2008) notes that adding management to integrated, business and enterprise wide risk implies the undertaking of a process that is systematic and structured. Such an approach thus aligns people, processes, knowledge, strategy and technology with the purpose of evaluating and managing the various uncertainties the organisation is disposed to as it creates
value. Coleman (2011) adds that risk management is not solely concerned with quantification of risks but about building flexible organisations with robust processes that are better able to identify and respond to risks that were not known or important in the past, powerful to withstand unforeseen events and the ability to tap into new opportunities. Coleman (2011) draws a distinction between the concept of risk management and risk measurement noting that there was general misconception between the two. The author notes that risk measurement is involved with the quantification of the different types of risks through models, such as Var, while management of risk is about utilisation of output from quantifying models to manage future risks. The theory of risk and return states that the higher the risk; the higher the return and vice-versa (Coleman, 2011). COSO (2004) reiterate that management should craft strategies and objectives that strike a balance between growth, return and related risk in order to effectively and efficiently deploy company resources to maximise value. However in banking, higher risk taking is accompanied by a higher apportionment or allocation of risk-capital as espoused in the Basel Accords (Mikes, 2005). Therefore, the need to define the bank’s risk appetite cannot go unnoticed due to the implications it holds on the capital of the bank.

Risk cannot be totally eradicated, but can be reduced or mitigated hence the concept of risk management (Drucker, 2004). The traditional way across the spectrum of industries would be to insure against known risks. However, with the world evolving, risk could also be transferred or controlled (Dickinson, 2001). Financial risks such as the movement of interest rates, commodity prices and exchange rates also gave rise to the emergence of derivatives such as futures, swaps and options (Dickinson, 2001).

Risk takes on different taxonomies across the diverse organisational platform. According to Greenbaum (2012), there are physical and moral hazards, qualitative and quantitative risks, one tailed and two tailed risks faced, the Knightian uncertainty, error and fraud, operational and financial risk and the list goes on endlessly. However, every organisation is generally faced by two broader types of risks, that is, core risks and ancillary risks (Greenbaum, 2012). These are also termed inherent and residual risks.
Core or inherent risks have been defined as those that are embedded in the activities that define the existence of the business such as credit risk in commercial banking and interest rate risk in investment banking. Using financial intermediaries such core risk are depicted in Table 2.1 below:

**Table 2.1: Core Risks**

<table>
<thead>
<tr>
<th>Core Risk</th>
<th>Intermediary Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality, Morbidity, Longevity</td>
<td>Life Insurance</td>
</tr>
<tr>
<td>Moral and physical hazards</td>
<td>Property and casualty insurance</td>
</tr>
<tr>
<td>Credit (counterparty)</td>
<td>Commercial Banks</td>
</tr>
<tr>
<td>Market Risks</td>
<td>Investment Banks</td>
</tr>
</tbody>
</table>

Source: Greenbaum (2012)

On the other hand ancillary or residual risks are those that inevitably accompany the core risks and might not seem pertinent company existential risks. These include risks that the company has no competence (comparative advantage) in managing such as natural disasters, force majeure, sovereign and regulatory risk. Consequently these ancillary risks also need to be managed in conjunction with the core risks. Thus the distinction between core and ancillary risk illuminates the difference between risk management and risk mitigation while highlighting the fundamental differences in the approaches to the managing these risks (Greenbaum, 2012).

**2.2 BANK RISKS**

Banks are faced by primarily financial and non-financial risks (Geessink, 2012). Financial risks include market risk, credit risk and liquidity risk. These have been termed traditional or core banking risks for the mere fact that they are inherent in the running of banking institutions (Greenbaum, 2012; Lam, 2007). Greuning & Bratanovic (2009) argue that bank risks fall into three categories namely financial, operational and environmental risks. The spectrum of these risks is represented in Table 2.2 below:
### Table 2.2: Banking Risks

<table>
<thead>
<tr>
<th>FINANCIAL RISKS</th>
<th>OPERATIONAL RISKS</th>
<th>ENVIRONMENTAL RISKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance Sheet structure</td>
<td>Internal Fraud</td>
<td>Country and political risks</td>
</tr>
<tr>
<td>Earnings and Income statement structure</td>
<td>External Fraud</td>
<td>Macroeconomic policy</td>
</tr>
<tr>
<td>Capital Adequacy</td>
<td>Employment practices and workplace safety</td>
<td>Financial infrastructure</td>
</tr>
<tr>
<td>Credit</td>
<td>Clients, products and business services</td>
<td>Legal infrastructure</td>
</tr>
<tr>
<td>Liquidity</td>
<td>Damage to physical assets</td>
<td>Banking crisis and contagion</td>
</tr>
<tr>
<td>Market</td>
<td>Business disruption and system failures (technology risks)</td>
<td></td>
</tr>
<tr>
<td>Interest Rate</td>
<td>Execution, delivery and process management</td>
<td></td>
</tr>
<tr>
<td>Currency</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Greuning & Bratanovic (2009)

### 2.2.1 FINANCIAL RISKS

These are ideosyncratic risks that the bank manages on a day to day basis that provide both upside risks (opportunities) if managed properly and downside risks (negative outcomes) once mismanaged (Coleman, 2011). He proferred five categories of financial risk as below:

- Market risk
- Credit risk
- Liquidity risk
• operational risk
• other (reputational, strategic, business legal and regulatory risks)

Greuning & Bratanovic (2009) further decomposes financial risks to incorporate the categories they term traditional risks; that is composed of balance sheet and income statement structure, credit and solvency risks - and treasury risks which are liquidity, interest rate, currency and market (including counterparty) risks. This categorisation is similar to the one adopted by Asare-Bekoe (2010). As noted by Greuning & Bratanovic (2009), bank risks carry complex interdependencies that might affect the overall risk profile of the bank if not watched closely. Girling, et al. (2010) also buttress this assertion by pointing out that all risk types are interrelated and that some central risks can influence the occurrence of other risks. An example being geopolitical events that could result in flaring of other risks namely market, credit, liquidity, operational and strategic risks (Girling, et al., 2010). This speaks directly to the concept of ERM or holistic management of risks.

The discussion that follows will centre on the main bank risks as highlighted in the preceding paragraph.

2.2.1.1 Market Risk

There is general consensus as to the definition of market risk by different authors. Greuning & Bratanovic (2009) define market risk as the risks of losses in on- and off-balance-sheet positions as a result of shifts in market prices. Market risk is referred to as the change in the value of a position due to fluctuations in the underlying parameters or economic factors to which that position relies on (Asare-Bekoe, 2010). Jorion (2003) refers to market risk as the risk of losses due to movements in financial market variables. Such economic factors (financial market variables) include interest rates, exchange rates, equity and commodity prices. Shimoko & Went (2010), who termed market risk as price risk, mentions asset and liability management risk as a subset of market risk.
2.2.1.2 The Measurement of Market Risk

A precursor to successful management of market risk is the involvement of the board and senior management to provide effective oversight, sound policies and procedures, comprehensive internal controls and independent audits as well as establishing appropriate risk measurement, monitoring, and control functions RBZ (2006). The latter conditions are also the precedents to the management of risks to be discussed later and have also been noted by Greuning & Bratanovic (2009), Girling, et al. (2010), Shimoko & Went (2010) and Jorion (2003).

2.2.1.3 VaR as a Measure of Market Risk

There are several ways through which interest rate risk could be managed that include gap analysis, duration, simulation and value at risk (VaR) (Greuning & Bratanovic, 2009). Among these, VaR has received much wide use though not independent of the other methods. RBZ (2006) defines VaR as a summary measure of the predicted loss (or worst) loss over a target period within a given confidence level. According to Jorion (2003), VaR is the maximum loss over a target horizon such that there is a low, prespecified probability that the actual loss will be larger. VaR is generally used to measure the downside of risk and as usually forward or future looking, though historical data is used to compute it (Shimoko & Went, 2010). Literature generally agree that there are three ways of measuring VaR as listed below:

- Parametric method or Variance/Covariance approach
- Historical simulation
- Monte Carlo method

The parametric method assumes a normal distribution of asset returns and that returns are serially independent, that is, are not influenced by the previous day’s returns (Greuning & Bratanovic, 2009). The calculation of potential movement involves the computation of the mean and standard deviation of the asset returns to achieve a combination of risk factor sensitivities of individual positions in a covariance matrix, representing risk factor volatilities and correlations between each asset.
Historical simulation calculates the potential change in the present portfolio based on historical or past movements in risk factors (Greuning & Bratanovic, 2009). Based on a 99% confidence, one would take the lowest of 100 daily observations, apply it to the current return to determine the following day’s maximum loss.

Monte Carlo method constructs the distribution of the current portfolio using a large sample of random combinations of price scenarios and probability of which are based on historical experience (Greuning & Bratanovic, 2009).

Basel II Accord (2004) notes that no particular method is prescribed for use to the bank. However, the model used should be able to capture all material risks embodied within the portfolio.

2.2.1.4 Credit Risk

Credit risk refers to the risk that an obligor fails to meet the bank’s obligation during the term of the obligation and accentuates itself on maturity of that obligation. Greuning & Bratanovic (2009) defines creditor counterparty risk as the chance that a debtor or issuer of financial instrument, whether an individual, a company, or a counterparty will fail to repay the principal and other related investment cashflows agreed in the contract. Jorion (2003) notes the interrelatedness of credit risk to other risk types. An example noted is that failure to pay by counterparty culminates into liquidity risk and eventually failures to settle (settlement risk). Greuning & Bratanovic (2009) argue that the catastrophic failures of many financial institutions were as a result of failure of credit risk management. The sources of credit risk as per RBZ (2006) include loans, interbank transactions, trade financing, foreign exchange transactions, financial derivatives and other off-balance sheet activities. Jorion (2003) mentions activities that act as precursors of credit risk which are called credit events. These are listed below as:

- default
- downgrade
- Bankruptcy
- obligation cross default
- repudiation
- obligation cross acceleration
Accordingly, monitoring of credit facilities leads to the identification of the above events and call for prompt remedial action by management.

The credit risk management takes several forms. Coleman (2011) mentions three ways as:

- measurement
- setting reserves, provisions, and economic capital
- other management areas - setting limits, portfolio management, and managing people and incentives

2.2.1.5 Liquidity Risk

Liquidity is required by banks to compensate for fluctuations in the balance sheet (expected and unexpected) and to provide funds for growth (Greuning & Bratanovic, 2009). RBZ (2006) define liquidity risk as the risk of financial loss to an institution arising from its inability to fund increases in assets and/or meet obligations as they fall due without incurring unacceptable losses or costs. Liquidity risk in a bank occurs on two forums (Jorion, 2003). The inability to convert liquid assets at favourable market prices constitutes the first and failure to raise adequate liquidity to meet daily obligations completes the list. The Basel Committee on Bank Supervision (2008) in a consultative paper notes that:

- liquidity is the ability of a bank to fund increases in assets and meet obligations as they become due without incurring unacceptable losses
- the maturity transformation role of banks (transforming short term deposits into long term loans) make banks vulnerable to institution-specific and market-wide liquidity risk
- virtually every financial transaction or commitment has liquidity implications for the bank
- effective liquidity risk management helps ensure a bank’s ability to meet cash-flow obligations, uncertain in nature as they are affected by external events and other agents’ actions
• liquidity risk management is paramount because a liquidity shortfall on one institution results in systemic risk (market-wide ripple effect)
• the past decade financial developments have magnified the complexity of liquidity risk and its management

2.2.1.6 Operational Risk

Basel II Accord (2004) pp. 149 defines operational risk “as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events”. The definition includes legal risk though neither strategic nor reputational risk form part of it. Bessis (2010) as cited by Asare-Bekoe (2010) expands on this by mentioning that system malfunctions, internal control breaches, violation of reporting systems, internal monitoring rules and non-compliance with internal procedures all account for operational risk. Greuning & Bratanovic (2009) notes that the growing use of automated technology, advancement in e-commerce, the increase in retail operations, greater use of complex instruments and sophisticated techniques in market and credit risk management have had a growing effect on the increase in operational risk. Due to this growing exposure to operational risk, Basel II Accord (2004) included guidelines to operational risk management where banks are now compelled to calculate a capital charge for this risk.

Basel II Accord (2004) provides three approaches to measuring operational risk for the purpose of a capital charge. These are the basic indicator approach, the standardised approach and the advanced measurement approach (AMA). Banks are supposed to choose a method that suites their individual risk profiles, complexity and size of their operations. The implementation of these techniques is a prerogative of the supervisory or regulatory bodies who are mainly central banks. The central bank or bank supervisory bodies should ensure that banks have risk management processes in place to identify, monitor and control operational risk. However these advances in operational risk management, there are also practical challenges in managing this risk. Asare-Bekoe (2010) asserts that it is difficult to justify universal causes of operations risk which can be used in developing generic tools and systems to manage operational risk as each
bank is unique. Secondly the development of an effective mechanism for tracking and reporting operational risk is still bewildered with hurdles since large losses from this type of risk are rare or isolated. This, thus, implies that there is data collection and methodical challenges that hamper proper management of operational risk. To minimise these hurdles, banks are urged to set up common classes of risk events that should act as a reservoir for operational risk events, loss and costs (Asare-Bekoe, 2010). The data gathered will then be used to construct risk maps detailing the probability and severity of the profiled risks. Linkages among the risks will also be noted and worst case estimates of risk events profiled. Once this is done, the modelling of operational risk loss distributions will enable the right capital to be charged to operational risks (Bessis, 2010 as cited by Asare-Bekoe, 2010).

2.2.2 NON-FINANCIAL BANK RISKS

Non-financial bank risks include operational, strategic and reputational risk (Geessink, 2012). However, it should be noted that bank risks are interlinked. Credit risk culminates into falling liquidity, which gives rise to liquidity risk. Liquidity risk inhibits the bank from settling its obligations hence reputational risk. This further exposes the bank’s assets to downgrades, thus exposing the positions to market risk. Thus these risks do not fit into clean, independent silos (Jorion, 2003). This was summed up by Woods (2010, pp6) commenting on Royal Bank of Scotland’s problem when she commented, “The compartmentalisation of risk-market, credit and operational risks sat in silos-negated a structure designed to cascade risk management down through different divisions. It meant portfolio risks aggregating across the silos, developed unchecked”. Lam (2007), commenting on why Asian Banks should engage ERM, noted the following points:

- banks face complex risks that are highly interdependent, and an ERM framework helps the bank to manage risks and their interdependencies
- an ERM framework provides the overall architecture for a bank’s risk management programme
- empirical research and industry surveys have indicated that there are clear business benefits for adopting ERM
2.3 The Rise of Enterprise Risk Management (ERM)

Historically, risk management was concerned with the reduction of loss caused by hazards on physical assets which was mitigated through insurance (Dickinson, 2001). But with the emergence of financial derivatives, such as options, swaps and futures, management realised that both financial and non-financial risks could now be managed together through the traditional method of insurance and hedging (Dickinson, 2001). The movement towards a holistic and integrated approach to managing risk further became more pronounced in the 20th century with the accretion of principles of contingency planning and business continuity taking centre stage (Havenga & Venter, 2007). The drive received further impetus through the new paradigm; that companies were faced by other goals other than profitability such as accountability, transparency and performance as demanded by different stakeholders (King III, 2004). Moreover, the development of enterprise wide software systems that aided in risk assessment and management such as SAP and PeopleSoft brought in a new dimension to risk management (Greenbaum, 2012).

Globalisation, advances in risk management tools, external developments and internal demand has aided in advancing the need for ERM (Lam, 2007). KPMG (2001) adds that e-business, new organisational partnerships and the speed with which business was being conducted had disposed organisations to an expanded set of risks. Greenbaum (2012) specifically notes that the development of financial derivatives revolutionised the financial markets and introduced new opportunities that were accompanied by new risk. He notes that the shadow banking system was a result of these new financial instruments which fostered opaqueness due to their complexity and immaturity. The recent corporate scandals such as Enron as well as financial collapses (Barings Bank, Lehman Brothers) have added an impetus to the need for managing risks aggregatively (Dickinson, 2001). Regulation also became a driving force, with regulators pushing hard for compliance (Economist Intelligence Unit, 2007). Greenbaum (2012) argues two important points based on the USA environment. Firstly the author points out the legislation (Sarbanes Oxely) which compelled chief executive officers (CEOs) and chief
financial officers (CFOs) to sign-off financial statements, heightening their personal liability for misstatements, as an involuntary drive towards adopting ERM. Secondly, the requirement by credit rating agencies such as Standard and Poors (S & P) that included ERM in their rating criteria. This, thus made ERM driven by the need for compliance as expected from government, regulators and credit rating agencies.

The realisation that financial risks and insurable risks could be managed together and that managing risks in silos was detrimental to the well being of the organization gave rise to enterprise risk management (Dickinson, 2001). This is supported by Townsend and Turner (2010), who noted that companies spend a lot of time insuring and managing financial and physical asset risks on a departmental basis. This silo approach they argued; led to loss prevention instead of value creation. KPMG (2001) note that ERM has provided new ways of looking at risk as represented in Table 2.3 below:

<table>
<thead>
<tr>
<th>FROM</th>
<th>TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk as individual hazards</td>
<td>Risk in the context of business strategy</td>
</tr>
<tr>
<td>Risk identification and assessment</td>
<td>Risk “portfolio” development</td>
</tr>
<tr>
<td>Focus on all risks</td>
<td>Focus on critical risks</td>
</tr>
<tr>
<td>Risk Mitigation</td>
<td>Risk optimisation</td>
</tr>
<tr>
<td>Risk limits</td>
<td>Risk strategy</td>
</tr>
<tr>
<td>Risk with no owners</td>
<td>Defined risk responsibilities</td>
</tr>
<tr>
<td>Haphazard risk quantification</td>
<td>Monitoring and measurement</td>
</tr>
<tr>
<td>Risk is not my responsibility</td>
<td>Risk is everyone’s responsibility</td>
</tr>
</tbody>
</table>

**Source:** KPMG (2001)

The evolvement of risk management above was complemented by COSO (2004) when they summarised the aims of ERM as:

- aligning risk appetite and strategy
- enhancing risk response decisions
- reducing operational surprises and losses
- identifying and managing multiple and cross-enterprise risks
- seizing opportunities
- improving deployment of capital (COSO, 2004)

The drivers of ERM as presented by several authors were summarised in Figure 2.1 below:

![Diagram of Enterprise Risk Management Drivers](image)

**Figure 2.1 : Drivers of ERM (Banham, 2004)**
However, there is general agreement in literature that ERM is generally a new phenomenon for which much still needs to be done. Greenbaum, (2012 pp.78) notes that the concept of ERM "embodies a certain ambiguity that lends it gravitas, even as it frustrates the pursuit of precision". The same sentiments were echoed by the Economist Intelligence Unit (2010) which concluded that ERM was currently an amorphous body of ideas awaiting formalisation, quantification, adoption and validation in practice. Mikes (2005) also notes that though the world was fast warming up to ERM, the concept remains elusive and underspecified. To this end, the concept of enterprise risk management has also assumed interchangeable terms, being known as holistic, integrated, corporate, enterprise-wide or strategic risk management (Mikes, 2005). This research was thus driven by the need to explore ERM with the intention of validating and making it a recognisable management tool and also used the terms above interchangeably to refer to ERM.

2.3.1 DEFINING ENTERPRISE RISK MANAGEMENT (ERM)

ERM has been defined differently, at least in semantics, but overall most definitions have carried the core meaning (Townsend & Turner, 2010). However, there has been generalisation and lack of consensus as to the proper definition of ERM (Locklear, 2012). KPMG (2001) also agreed that ERM definitions vary but however have common items such as being a top-down approach, that it is supportive of organisational strategy, that it is focused on new ways of managing and optimising risks of the highest importance to the management and board of directors. This led to the use of common definition coined by COSO (2004) in literature. COSO (2004) defines enterprise risk management as:

"...a process, affected by the entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise designed to identify potential events that might affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of business objectives" (COSO 2004, p4).
The above definition is referred to by Townsend & Turner (2010), Havenga & Venter (2007), Locklear (2012) and Geessink (2012) as the guiding definition. In some cases the definition is used in conjunction with ISO 31000 guidelines (Linke, 2011). However (Manab, et al., 2010) cite Deloach (2000) definition of ERM as:

"A structured and disciplined approach: it aligns strategy, processes, people, technology, and knowledge with the purpose of evaluating and managing the uncertainties that the enterprise face as it creates value".

Though the wording of these definitions is different the following themes stand out:

- It’s a structured approach
- Involves the board of directors
- Involves people in the organisation
- Is used in strategy setting
- Identifies and manages risk
- Purpose is to achieve objectives and create shareholder value

The COSO (2004) definition will be adopted for this study.

2.3.2 ENTERPRISE RISK MANAGEMENT (ERM) AND TRADITIONAL RISK MANAGEMENT (TRM)

Traditionally, risk has been managed in silos, that is, individual risks being viewed separately and managed mainly through financing (insurance) and controlling (Manab, et al., 2010). The same sentiment was also shared by Geessink (2012), who goes further to point to the fact that this led to inefficiencies and unnecessary costs. The two authors agree on the fact that risk overlaps resulted in cost inefficiencies within organisations. Rao (2007), concludes by comparing the differences between these two concepts in Table 2.4 as follows:
Table 2.4 : ERM Continuum

<table>
<thead>
<tr>
<th>Traditional Risk Management (TRM)</th>
<th>Enterprise Management (ERM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fragmented -department/function manage risk independently</td>
<td>Integrated - risk management coordinated with senior level oversight; everyone in the organisation view risk management as part of his/her job</td>
</tr>
<tr>
<td>2. Ad hoc - risk management done whenever managers believe need to do it exists</td>
<td>Continuous - risk management is on-going</td>
</tr>
<tr>
<td>3. Narrowly focused - pure insurable and financial risks</td>
<td>Broadly focused - all business risks and opportunities considered</td>
</tr>
</tbody>
</table>


Enterprise risk management (ERM) also referred to as enterprise-wide, integrated, holistic or corporate risk management infers the removal of traditional functional, departmental, divisional or removal of cultural barriers (KPMG, 2001). ERM thus entails the management of organisational risks in a holistic, integrated, process oriented and future-focused dispensation that eventually enables the company to manage all key risks and as well deliver value to shareholders.

However, the adoption of ERM in an organisation does not mean the abandonment of core or traditional risks. Greenbaum (2012) posit that ERM is risk management, quite apart from its efforts to identify, measure and mitigate the complex hazards that rise to the level of enterprise risk. SCOR (2009) adds that the difference between risk management and enterprise risk management is the "e", for enterprise. The latter involves doing the same process (risk management) consistently across all enterprise risks using the same measures and approach. Mikes, (2005) notes that the management of bank risks (market, credit and operational) in silos gained enough acceptance and
influenced the reforms in Basel II Accord (2004) that compelled banks to hold capital reserves for a particular amount of risk carried. In addition, management of risks in silos has enabled banks to set limits in different types of risks, monitoring and reporting developments in risk silos as well as maintenance of regulatory capital. The advances in risk silo management influenced improvements in the regulatory framework from previous Basel I, to Basel II Accord in two ways:

- by recognising the risk silos it advocates to be measured - along with market and credit risk, it now includes operational risk
- the measurement approach that stretches to include Advanced Measurement Approach (AMA) for operational risk (Mikes, 2005).

However, aggregation of these silo risk remained a challenge due to the disparate measurement techniques employed and the correlations that existed between these. The recent development of a common denominator called Economic Capital, to measure market, credit and operational risk entailed that banks could now aggregate silo risks to a common total risk estimate (Mikes, 2005). Economic Capital is defined as the amount of capital that covers all liabilities in a worst case scenario of unexpected market, credit, operational and/or insurance loss (Mikes, 2005). Thus as argued by BIS (2003), the Economic Capital methods have provided a common metric through which silo risks could now be aggregated, compared and managed holistically.

### 2.3.3 BENEFITS OF ENTERPRISE RISK MANAGEMENT

ERM is pitched in literature as a panacea to the inefficiencies inherent in traditional risk management. Nocco, et al. (2006), argue that companies that implement (ERM) are likely to enjoy competitive advantage and enhance shareholder value in the long run than those that adopt a silo approach to risk management. IRM (2010), also adds on to these benefits to include better strategic decisions, reduced cost of funding, improved perception of the organisation and more accurate financial statements among other benefits. Havenga & Venter (2007) also raise the stake of benefits to include corporate governance and compliance enhancement. The increasing importance and scope of ERM is summed up in Figure 2.2 as below:
However, whilst authorities agree that ERM has benefits, there is a general acceptance that quantification of such benefits has been a milestone. As Havenga & Venter, (2007) note, there seems to be a gap between theoretical benefits and actual benefits of ERM. In a survey carried out by Deloitte (2012), 85% of respondents concurred to the benefits of ERM, but agreed that its difficult to quantify the value. The value was, however, seen in greater understanding of risk and controls as well as improved regulatory perception (Deloitte, 2012). Kraus and Lehner (2012), argued that there is a positive correlation between the implementation of ERM and shareholder value or value creation. However, Pragach and Warr (2010) as cited by Kraus & Lehner (2012), fail to find support that ERM implementation and value creation are related.
The distortion surrounding value creation and ERM implementation seem to trace its roots to financial models of systematic and unsystematic risk. ERM seems to disapprove the Markowitz portfolio theory of diversifiable and undiversifiable risk (Kraus & Lehner, 2012). The theory assumes that, under certain circumstances, shareholders are able to eliminate idiosyncratic (firm specific) risks through diversifying the risk. This leaves them exposed to systematic/market risks which when aggregated to the former results in total risk. Two methods for managing the total risk were then suggested, namely portfolio diversification and asset allocation (Markowitz, 1952 as cited by Kraus and Lehner, 2012). Systematic risk is the risk that remains after diversification and can be managed through the reduction of risky assets and use of financial hedges such as forwards, swaps, and futures. It is thus argued that since diversification of firm risk is possible, there should not be value attached to that as this constitutes a costless activity (Kraus & Lehner, 2012). Despite this, literature seem to coincide on the fact that ERM results in tangible and intangible benefits. Such benefits have been conclusively listed by Kraus and Lehner (2012) as:

- optimising risk/return profile of the organisation
- reduction in earnings volatility
- boosting management confidence in business operations
- risk monitoring
- creating smooth governance procedures
- enriching corporate reputation
- improving clarity of organisation-wide decision and chain of command
- encouraging corporate entrepreneurship
- boosting profitability

The above is argued to culminate into reduced cost of funds and positive firm performance.

Empirical evidence of ERM benefits has been documented by Lam (2007) as per Table 2.5 below:
### Table 2.5 Empirical Benefits of ERM

<table>
<thead>
<tr>
<th>BENEFIT</th>
<th>COMPANY</th>
<th>ACTUAL RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shareholder Value improvement</td>
<td>Global Bank</td>
<td>Outperformed S&amp;P 500 banks by 500%</td>
</tr>
<tr>
<td>Early warning of risks</td>
<td>Investment Bank</td>
<td>Global risk limits cut by a third ahead of Russian crisis</td>
</tr>
<tr>
<td>Loss reduction</td>
<td>Asset-Management Company</td>
<td>Loss-to-revenue ratio declined by 30%</td>
</tr>
<tr>
<td>Regulatory capital relief</td>
<td>Commercial Bank</td>
<td>$1 billion regulatory capital relief</td>
</tr>
<tr>
<td>Insurance cost reduction</td>
<td>Manufacturing company</td>
<td>20-25% insurance reduction</td>
</tr>
</tbody>
</table>

*Source: Lam, (2007)*

### 2.4 Frameworks (Process) of Enterprise Risk Management (ERM)

The theoretical framework is important to any study as it allows to unpack the underlying concepts underpinning the study. As Mikes (2005) would allude, ERM remains elusive even after so many theories have been espoused. The Casualty Actuarial Society (CAS) published its report on ERM overview in 2003 and this was followed by the upgrading of the Joint Australia /New Zealand Standard for Risk Management to ISO31000 in 2009 (Kraus & Lehner, 2012). However, the Committee of Sponsoring Organisations of the Treadway Commission (COSO) ’s integrated risk management framework has received world wide recognition and use (Kraus & Lehner,
The framework expanded on the initial internal control framework (COSO, 2004). Diagramatically the framework is represented in Figure 2.3 below:

![COSO ERM Framework](image)

**Figure 2.3 : COSO ERM FRAMEWORK (COSO, 2004)**

### 2.4.1 COMPONENTS OF COSO FRAMEWORK

#### 2.4.1.1 Internal Environment

The internal environment provides the platform through which risk management is implemented (Lennon, 2007). It includes employee attitudes to risk, culture of the company, ethical values, management style, and risk appetite (COSO, 2004). Employee attitude to risk is an important ingredient to the ERM acceptance in an organisation. The Economist Intelligence Unit (2007) argue, in a research they carried out, that although the buy in from the board is necessary, a strong risk culture and awareness was a major
ingredient to the success of ERM. Teschner, et al., (2008) also note that a strong risk culture is a function of leadership or the board. Subsequently, they point out three building blocks towards achievement of a sustainable risk culture as listed below:

- the board expertise in understanding and defining the organisation's risk appetite thus understanding the risk profile
- encourage constant communication and making risk everyone's business
- raise the profile of the risk teams by having talented representatives of risk with expertise on executive committees and boards of directors

As Townsend & Turner, (2010) would argue, although ERM is a top-down approach involving the board of directors, institutions should ensure the involvement of all levels of employees in the program. COSO (2004) though agreeing that the chief executive officer is ultimately accountable for the organisation's risk management, concurred that, in ERM, everyone level of the organisation matters. The Australia/NewZealand Standard 4360 (2004) prescribes a list of areas that the internal context dwells on below as:

- culture
- internal stakeholders
- structure
- resource capabilities such as people, processes, systems and capital
- goals and objectives and the strategies that are in place to achieve them

These fall in consensus with what was alluded to earlier by the noted authors.

The establishment of the internal context is important because of the reasons below (Australia/NewZealand Standard 4360, 2004),

- risk management takes place in the context of the goals and objectives of the organisation
• the major risk for most organisations is that they fail to achieve their strategic, business, project or are perceived to have failed by stakeholders

• the organisational policy, goals and interests help define the organisation's risk policy and

• specific objectives and criteria of a project or activity must be considered in the light of the organisation as a whole.

2.4.1.2. Objective Setting

Objectives form part of any strategy formulation. The events affecting achievement can only be muted after objectives have been set (COSO, 2004). ERM assists the process of objective setting and the alignment of these to the mission and risk appetite of the entity (Deloitte, 2012). Objectives of ERM fall within four categories of strategic, operations, reporting and compliance (COSO, 2004). Strategic objectives regards the overall tone set by the board of directors and management that are distilled to the functional and business unit level (Lennon, 2007). The decomposition aims at achieving measurable sub-goals that would be beneficial in achieving the broader objectives. Operations objectives relate to the effectiveness and efficiency of the company’s operations (COSO, 2004). Reporting objectives deal with the reporting activities appropriate in making the reports accurate and complete for the different stakeholders (COSO, 2004). Compliance objectives deal with the company abiding by the laws and regulations in the operating environment (COSO, 2004).

2.4.1.3. Event Identification

The drive towards ERM is attributed to a combination of internal and external pressures (Kraus & Lehner, 2012). Such pressures from corporate governance bodies, regulators and investors are cited as some external pressures driving ERM adoption (Economist Intelligence Unit, 2007). Thus, these pressures lead to events that should be identified and linked to objectives. The identification of events also enable the entity to identify opportunities and threats (COSO, 2004). These events are both internal
and external and have been covered in Chapter 1 under macro-environment and SWOT analysis.

The events identified above assist in identifying the risks and hazards that might affect the organisation. IMA (2011) prefers three categories of risk identification techniques that can be employed by organisations as per Table 2.6 below:

Table 2.6: Risk Identification Techniques

<table>
<thead>
<tr>
<th>INTERNAL INTERVIEWING AND DISCUSSION</th>
<th>EXTERNAL SOURCES</th>
<th>TOOLS, DIAGNOSTICS, AND PROCESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews</td>
<td>Benchmarking</td>
<td>Checklists</td>
</tr>
<tr>
<td>Questionnaires</td>
<td>Risk Consultants</td>
<td>Flowcharts</td>
</tr>
<tr>
<td>Brainstorming</td>
<td>Discussion with peers</td>
<td>Scenario analysis</td>
</tr>
<tr>
<td>Self-assessment and other facilitated workshops</td>
<td>Comparisons with other organisations</td>
<td>Business process analysis</td>
</tr>
<tr>
<td>SWOT Analysis</td>
<td></td>
<td>System engineering</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Process mapping</td>
</tr>
</tbody>
</table>

Source: Adapted from IMA (2011)

2.4.1.4. Risk Assessment

Risks are profiled and analysed with the likelihood of each forming the basis for its management. Risks are assessed on an inherent and residual basis. Soileau (2010) notes that inadequate risk assessment, ineffective implementation of controls and strategies to mitigate identified risks have been the contributory factors to catapulting the world’s financial scandals such as Enron and Barings Bank as well as losses suffered from natural disasters, terrorism and poor management judgements. The assessment of risks has been viewed to culminate into the summation of all risks that
face the organisation. However Greenbaum (2012) argues that only those risks that pose a hazard to the existential of the organisation should be the domain of ERM. This was further illustrated as per Table 2.7 below:

**Table 2.7 : Disposition to risks**

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th>SEVERITY</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Trivial-self insure</td>
<td>The domain of ERM</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>Commonly insurable and hedgeable</td>
<td>Not a business</td>
<td></td>
</tr>
</tbody>
</table>

**Source: Greenbaum (2012)**

KPMG (2001) notes that risk identification and assessment tools aid management in collectively collating all risks facing the organisation, assess the probability (likelihood) of occurrence as well as estimating the impact of each risk in the event it occurs. The Orange Book (2004) as cited by Makoro (2008) adds that there is no particular standard as to the scale of risk matrices but that it is incumbent upon every organisation to choose a tool that suits its circumstances. The author proferred a standard tool that uses colours to clarify the significance of risk as in Figure 2.5 below:
Figure 2.5: Risk /Tolerability Matrix

The risk matrix above portrays the barest minimum tool that an organisation requires to assess risks. The Orange Book (2004) as cited by Makoro (2008) notes that once the risk has been assessed, the risk priorities of the organisation would emerge. The key
risks, denoted in red, would be given priority by the management and board. KPMG (2004) adds that those in the lower left quadrants might be risks prone to reduction in controls.

2.4.1.5 Risk Response

Moeller (2007) as cited by Makoro (2008) notes that management should bear the responsibility for the evaluation of risk and return profiles of the company with the associated costs involved in order to craft the best risk response. KPMG (2001) defines this process as risk optimisation as it involves choosing amongst various risk-return alternatives. Risk controls are aimed at reducing the possible impact, losses and minimisation of possible negative consequences that might affect the organisation. In addition, risk controls involve the identification of a range of options for mitigating risk, evaluating these and the preparation and implementation of the control plans (Australia/New Zealand Standard 4360, 2004).

The Orange Book (2004) as cited by Makoro (2008) argue that the purpose of addressing risk is to turn uncertainty to the benefit of the organisation by mitigating the threats and making opportunities realisable. To this end, the author professes five methods of addressing risk, that is, tolerating, transferring, terminating, treating and realising the opportunity. COSO (2004) notes that management should select risk responses ranging from avoiding, acceptance, transferring or reducing. The responses should be aligned to the entity’s risk appetite and tolerance. Young (2006) as cited by Makoro (2008) propose three categories upon which risk mitigation and the tools that are used there-upon could be divided as shown in Figure 2.4 below:
Figure 2.4: Categories of risk control decisions (Makoro, 2008)

The discussion on risk response would be complete if we look at the various risk control strategies and closely acquaint ourselves with what each entails.

**Risk tolerance**

KPMG (2001) refer to risk tolerance as the the level of risk appetite or acceptance that has been accepted within an organisation. In so doing, acceptance entails a strategy of taking no action (Moeller, 2007 as cited by Makoro, 2008). Furthermore, when it is
economical to retain the risk or no alternatives exist to remove, reduce or turn the risk into an opportunity, risk retention becomes the only option (Chapman, 2006 as cited by Makoro, 2008).

**Risk transfer**

This involves transferring the risk to a third party in order to manage the exposure (Lam, 2007). Risk exposures might be too high for the bank to absorb in its portfolio or it might be cost effective to have a third party managing the risk hence risk transfer becomes the acceptable method of managing financial risks as well as insurance for physical hazards to company assets. Australia/New Zealand Standard 4360 (2004) also adds the use of contracts such as joint ventures and partnerships to spread responsibility and liability as other methods of transferring risk.

**Risk Avoidance/Termination**

This is a strategy of circumventing the risk or walking away from it (Moeller, 2007 as cited by Makoro, 2008). Risk removal entails eradicating the risk altogether in the event that a negative outcome is anticipated (Chapman, 2007 as cited by Makoro, 2008). Eradicating risks in a bank include matching assets and liabilities and removing limits on net foreign exchange positions.

**Realising or Taking the opportunity**

COSO (2004) reiterates that risk management is not only concerned with the managing downside or negative risk, but also taking hint of the opportunities that are sometimes inherent in risks. Opportunities in risk management arise in the course of implementing the risk response strategies set above; where an organisation realises that it can benefit from the risk in another way. However the Australia/New Zealand Standard 4360 (2004) notes that this should be done in light of the balance between the cost and benefit or risk-return profiles of each scenario.

**Treating Risks**
Risk treatment involves taking the necessary action to reduce, control or mitigate the risks (The Orange Book, 2004 as cited by Makoro, 2008). Controls aimed at reducing or eradicating the risks become paramount. Such controls include the setting of trading and gap limits in banks. The Australia/New Zealand Standard 4360 (2004) provides options for treatment of negative risks as listed below:

- avoiding the risks by deciding not to start or continue with the activity that gives rise to them
- changing the likelihood of the risk, to reduce the likelihood of the negative outcome
- changing the consequences, to reduce the extent of the losses
- sharing the risk
- reducing the risk

2.4.1.6 Control Activities

Policies and procedures are put in place to help implement the risk responses effectively. The control function is an ongoing process that is prevalent at every level of the organisation. Teschner, et al., (2008) profer a model of risk best practice that indicate the three lines of defences that exist within a banking institution as represented in the Table 2.8 below:
Table 2.8 : Risk Management Three Lines of Defence

<table>
<thead>
<tr>
<th>First Line of Defense</th>
<th>2nd Line Defense</th>
<th>3rd Line of Defense</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management and Front Office</td>
<td>Risk Management Function</td>
<td>Audit</td>
</tr>
<tr>
<td>• Promote a strong risk culture and sustainable risk return thinking</td>
<td>• combination of watchdog and trusted advisor, police limits with &quot;teeth&quot;</td>
<td>• Good understanding of the capital, type of business and risk management</td>
</tr>
<tr>
<td>• Portfolio optimisation on the macro and micro level</td>
<td>• understand how the business makes money and actively challenge initiatives where appropriate</td>
<td>• Top talent within audit to challenge front office and risk management function</td>
</tr>
<tr>
<td>• Promote a culture of adhering to limits and managing risk exposure</td>
<td>• Top talent with business experience engaging with front office as equals</td>
<td>• independent oversight function - with enforcement ability (e.g. immediate fulfillment of findings)</td>
</tr>
<tr>
<td>• On-going monitoring of positions and inherent risk</td>
<td>• Risk management separate from risk control</td>
<td>• ability to link business and risk with process and IT know how</td>
</tr>
<tr>
<td></td>
<td>• overarching risk oversight unit across all risk types</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• intraday availability of data and positions</td>
<td></td>
</tr>
</tbody>
</table>

Source : Teschner, et al., 2008
2.4.1.7 Information and Communication

Effective risk governance involves communicating risks (SCOR, 2009). According to COSO (2004), "relevant information is identified, captured and communicated timely to responsible people to enable them to carry out their duties". The information is communicated down across and up the entity. Lennon (2007) notes that the need for communication is to enable capability of the company to gather the data, store it, and process it at the same time ensuring it will be communicated. It therefore means the use of information technology becomes paramount with issues of system connectivity and information system enhancement becoming paramount. This is in line with the expansion of the definition of risk management by Barton et al (2002) as cited by Makoro (2008) that highlighted the integration of people, processes and technology in the process.

2.4.1.8 Monitoring

The success of ERM is accomplished through monitoring and making necessary modifications (COSO, 2004). This is done through ongoing management activities, separate evaluations or both. IRM (2010) suggest that using a risk register provides a consistent method of monitoring risks. However, they warn that risk registers should not be static record of risks being faced but should be action oriented and auditable. Audit should thus be able to follow up on the action plans to ensure implementation of courses of action provided by the risk champions. Monitoring should be embedded in the organisational systems to enable the setting of specific limits and their measurement and adherence to these (KPMG, 2001). Other methods include using internal and external auditors, benchmarking against market or other data and other retroactive review of risk results.

The COSO (2004) framework is geared towards attaining the following objectives:

- **Strategic** - top level goals, supported and aligned with the mission
- **Operations** - effective and efficient use of resources
- **Reporting** - reliability of reporting
- **Compliance** - with laws and regulations
It is also important to note that the COSO (2004) framework is not a serial process but is multidirectional and iterative with components affecting each other.

2.4.2 ENTERPRISE RISK MANAGEMENT (ERM) IMPLEMENTATION

The implementation of ERM is signalled through several organisational actions. Literature puts forward the appointment of Chief Risk Officer (CRO) as one such signal (Geessink, 2012). KPMG (2001), asserts that this has become a trend and adds the creation of ERM program officers as part of the process. The reason for this has been that just as companies have revenue and profit strategies, there is also need to have a risk strategy set by the CRO. However, the appointment does little to signal the extent of implementation. Furthermore, the appointment might be a regulatory requirement by central banks like in Zimbabwe.

The presence of a risk committee within a bank is another signal of ERM implementation (Geessink, 2012). Aebi et al. (2011) as cited in Geesink (2012), view the presence of a risk committee as an indication of stronger risk management. However, these authors recommend for more information about such committees before drawing some conclusions.

ERM implementation has been measured in three different ways in recent years. These measures by Aebi et al. (2011), Ellul and Yeramili (2010) and Baxter et al. (2011) as cited in Geesink (2012) and Sekerci, (2009) will be unpacked below.

Ellul and Yeramili (2010) defined an ERM index on banks which focuses on organisational structure and risk management function. It focuses on factors such as the CRO position and the experience of the supervisory board and risk committees. This has an advantage in that the ERM adopts a top-down approach hence more emphasis being placed to the apex of the organisation. The disadvantage of this is that the CRO or Head of Risk might not be on the board as in some Zimbabwean banks.

Baxter et al. (2011) developed an index of ERM quality that focused on factors ranked high on the Standard and Poors (S &P) ERM quality rating. The factors are then used to define financial risks/resources, complexity and corporate governance, argued as
important factors in S&P ERM quality rating. The S&P rating is not used in the case in question therefore making this approach not applicable.

Lastly Aebi et al. (2011) extended Ellul and Yeramili (2011) index in order to measure the effect of corporate governance on risk management. They argue that each bank should have a dedicated board level risk committee of which a majority will be independent and that the CRO should be on the board. This is consistent to the King III (2009) report on principles of good corporate governance that calls for majority of independent directors as well as the appointment of a board risk committee. However, the authors could not come up with a combined index. Notwithstanding, Aebi et al. (2011) uses different factors for their risk management measure. The presence of the CRO on the board as well as the presence of a risk committee on the board level are included. As alluded earlier, the presence of the CRO points to the management of risks holistically. Secondly the board size, level of financial experience and board independence have an influence on ERM. Thirdly, the risk committee is scrutinised in terms of the number of meetings held, number of directors and their independence. Finally, the reporting lines are analysed from the CRO to the board and the direct reporting of the CRO to the CEO. This model will thus be adopted as a measure of ERM for the purposes of this research.

Study has shown that many company executives dread implementing ERM due to lack of knowledge about the infrastructure required, which is thought to be costly (Alajmi, 2012). However, Beasley et al (2006) as cited by Rao (2007) and Alajmi (2012) suggested that there can be a linkage between ERM implementation and the balanced scorecard that a company can leverage on. A generic balanced scorecard translates the company’s mission and strategy into specific, measurable operational and performance metrics across four perspectives: learning and growth, financial performance, internal processes, and customer satisfaction (Rao, 2007). It is assumed that the balanced scorecard balances the financial and non-financial objectives to achieve the overall organisational performance goals and objectives in an integrated manner. This assertion lies in the fact that learning and growth for employees is meant to improve employee knowledge and skills which enhances internal business processes. This leads to customer satisfaction hence the attainment of financial objectives and thus improved
financial performance (Rao, 2007). Furthermore, by adopting the scorecard, individual responsibilities will be tied to organisational strategies by defining and monitoring specific strategic responses, ultimately increasing the likelihood of achieving organisational objectives (Rao, 2007). Alajmi (2012) concludes by noting that while ERM is both positively and negatively focused on factors that might hinder the progress of organisation in its quest for success, balanced scorecards measure the progress towards achievement of objectives hence the two can work together to enhance the attainment of strategic objectives. Thus the balanced scorecard, with its enterprise-wide approach, provides the best platform that can easily be exploited to focus on risk management as part of performance evaluations.

2.4.3 ENTERPRISE RISK MANAGEMENT AND CORPORATE GOVERNANCE

Naidoo (2002) defines corporate governance as the practice by which companies are managed and controlled. It includes the following:

- creation and monitoring of a system of checks and balances to ensure a balanced exercise of power within the company
- implementation of a system to ensure compliance by the company with its regulatory and legal requirements
- implementation of a process whereby risks to the sustainability of the company's business are identified and managed within agreed parameters.
- development of practices which make and keep the company accountable to the broader society in which it operates (Naidoo, 2002).

which an organisation is governed and controlled in order to achieve its objectives. The control environment makes an organisation reliable in achieving these objectives within an acceptable degree of risk”.

King III (2009) maintains that the tenets of good corporate governance are fairness, accountability, responsibility, and transparency founded on intellectual honesty. The consequences of poor governance resulting from negligence, dishonesty and flawed processes is that stakeholder support ebbs. Greuning & Bratanovic (2009) posits that failed governance result in bank failures resulting in significant public cost, increase in contagion risk and negatively impact on deposit insurance. Manab, et al. (2010) add that a series of company failures, corporate scandals and fraud are related to weak corporate governance and risk management as evidenced in the Asian crisis of 1997. This has also been the reasons for banks calling for effective risk management.

Risk management and corporate governance are inextricably intertwined to the extend that the stability and improvement in performance of a company is related to these two components (Manab, et al., 2010). Knight (2006, p.6) as cited by Manab, et al. (2010) regard corporate governance as the glue that holds the company together with risk management providing the resilience as the organisation strives to achieve its objectives. Manab, et al. (2010) posit that enterprise-wide risk management (EWRM) practice and concept has been observed to be the vital cog that strengthens corporate governance. International bank capital regulation and corporate governance have been also poised as two areas where ERM has been observable (Mikes, 2005). In a survey by Lam (2007) of Asian banks, it was found out that corporate governance was necessary in pursuing ERM. To affirm the importance of corporate governance, empirical evidence by Lam (2007) show that in a survey conducted by McKinsey and Company in 2000 of 200 institutions worldwide, a large number of investors were prepared to pay a premium for companies with effective corporate governance structures. In the USA, 83% were prepared to pay an average of 18.3%.

Manab, et al. (2010) asserts that risk management and corporate governance standards are explicitly linked and that the board of directors are responsible for management of
Corporate governance initiatives have found interest from corporate governance bodies and institutional investors, who develop them. The assertion seems to find support from King III (2009) in their principles of corporate governance on risk management by noting the following:

- the need for a board risk committee mainly composed of experienced and independent board members
- that risk management is a prerogative of the board who should provide oversight
- that management should implement the agreed risk management policies
- that the internal audit should adopt a risk-based approach

In addition, Mikes (2005) notes that the Basel II Accord endorses the adoption of ERM as a universal tool that can accommodate the techniques required for bankcapital adequacy requirements. Deloitte (2012) conclude that present day risk management is a governance function where the board and audit committee have put more focus on enterprise risk than before. To affirm this point, in a survey carried out in East Africa by Deloitte in 2012, 80% of financial organisations' board of directors indicated that they received risk management reports and approve ERM plans and processes.

### 2.4.4 ENTERPRISE RISK MANAGEMENT AND FIRM PERFORMANCE

As argued by KPMG (2011), ERM is concerned with the transformation of risk into action steps that create value. Shareholder value is usually measured in terms of an increase in the share price of a company in the event that it is listed on an exchange. As argued earlier, financial theory as propounded by Markowitz (1952), argue that shareholder value is not enhanced by risk management but by portfolio diversification and asset allocation. In addition, Beasely et al. (2008) as cited in Geessink (2012) investigated this claim by relating the share prices and ERM of banks and non-banks during announcements. ERM is measured as the appointment of CRO and market reaction to it as the accumulative abnormal return. The result was an insignificant
reaction or negative relationship which entailed that there was a negative relationship between firm value and ERM.

Further research by Pragach and Warr (2010), measured the effect of factors which are said to be affected by the implementation of ERM. These factors are risk, financial, asset and market characteristics of the firm. Financial characteristics looked at the leverage, cash and profitability levels of the firm. The effect of impairment of assets under distress constituted the asset characteristics. Finally, equity markets should react to lower costs of financial distress due to the implementation of ERM. However, no significant relationship was established leading to the conclusion that ERM and firm value were not related.

Notwithstanding, other research findings confirm that there is a positive relationship between ERM and firm performance. Liebenberg and Hoyt (2011) as cited in Geessink (2012), investigated this relationship using the appointment of CRO as the ERM indicator and Tobin's Q as the proxy for firm value. Tobin's Q measures firm value as the ratio between the market and book value of equity and liabilities. The results showed that a relationship between ERM and firm value existed. The authors also found a significant difference in the Tobin's Q of firms that had implemented ERM and those that had not. They concluded, thus that, ERM implementation does enhance firm value.

Baxter et al. (2011), relate high quality ERM programs, firm performance and market reactions towards revision of ERM quality ratings by agencies. They use Tobin's Q to measure value and Return on Assets (ROA) to measure performance. They found support in that markets do value ERM programs but market reactions would have been factored in to the share price.

Based on Baxter et al. (2011) and Liebenberg and Hoyt (2011) as cited in Geessink (2012), it is thus proposed that firm performance and ERM implementation are related.
2.4.5 FACTORS AFFECTING FIRM PERFORMANCE

Notwithstanding the recent search for the relationship between ERM and bank performance, banks have so long been affected by various other factors. These factors, as discussed by Dietricha & Wanzenried, (2009), can be summarised as capital, leverage, firm efficiency, credit risk/quality, and firm diversification.

2.4.5.1 Bank capital

The capitalisation of a bank sends important market signals regarding its strength to absorb unanticipated shocks (Dietricha & Wanzenried, 2009). The Basel Accords by the Bank of International Settlements, are concerned with capital allocation to risk-taking activities of a bank. Of particular importance is tier-1 capital, composed of paid-up capital and reserves, which is an important indicator in calculating the capital adequacy of banks. Therefore, banks with a higher tier-1 capital generally portray safety, are profitable and less prone to effects posed by shortage of debt (Sekerci, 2009; Dietricha & Wanzenried, 2009).

2.4.5.2 Credit Quality

This measures the ratio of loan-loss provisions to total loans and indicates the loan quality of the bank (Dietricha & Wanzenried, 2009). Higher ratios are associated with a deteriorating loan book, while lower ratios indicate quality loan book and therefore higher profitability. Loan provisions also have a double effect of reducing profitability as well as the bank's capital adequacy.

2.4.5.3 Level of Leverage

The issue of debt in the capital structure of a bank has received so much attention in previous decades with theories from Modigliani and Miller of the 1960s forming the basis of arguments. Studies have found out that a positive relationship exists between the ownership of a bank and its performance (Dietricha & Wanzenried, 2009). The rationale for this, as supported by Liebenberg (2011) as cited in Geessink (2012), is that leverage reduces the tendency of managers to invest in sub-optimal projects.
common agency problem (Sekerci, 2009). Therefore, the amount of debt in an organisation has both mixed signals of increased risk as well as performance.

2.4.5.4 Degree of Diversification

A bank's main source of revenue is derived from its core business in terms of the interest income (Baele, De Jonghe, & Vennet, 2007 as cited by Geessink, 2012). However, higher non-interest income is associated with other activities such as trade finance. Thus, higher non-interest income signals divergence from core business of financial intermediation and therefore negatively affect bank performance.

2.4.5.5 Bank Efficiency

The ability of a bank to post profits at a lower cost, as measured by the cost-to-income ratio, indicates its efficient utilisation of assets (Dietrich & Wanzenried, 2009). Higher cost income ratios negatively affect performance and vice-versa. However, other authors such as Smirlock, (1985); Pasiouras and Kosmidou, (2007) as cited by Sekerci, (2009), attribute the size of a firm to its level of efficiency through economies of scale.

2.5 CONCEPTUAL FRAMEWORK OF ERM

Based on the theoretical concepts unravelled in the literature review, the conceptual framework can now be depicted in figure 2.5 as per below:
2.6 CHAPTER CONCLUSION

The literature review shows a mixed bag of the real effect of enterprise risk management (ERM) on company performance. However; whilst empirical evidence given shows that indeed ERM provides benefits, the only area of resolve left is consensus regarding how to quantify the benefits of ERM. The areas of enterprise risk management in relation to EZW will be looked at after adopting the methodology proffered in the next chapter.
CHAPTER 3: RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter will focus on the methodological approach of how the research was conducted. According to Saunders et al. (2003), methodology points to the theory of how the research will be conducted and includes the theoretical and philosophical assumptions upon which it is based and the implications of these to the methods or method used. Johnson & Onwuegbuzie (2004) prefers three types of research methodology, that is, qualitative, quantitative and mixed. The research adopted a quantitative methodology approach as it explored the relationship between the variables under study.

3.1 RESEARCH DESIGN

The research design details the structure that ensures that the research answers the research questions in a way that enhances accuracy and validity of results (Alajmi, 2012). The two main types of designs in research are cross-sectional and longitudinal designs. Cross-sectional designs are conducted at a specific point in time. Longitudinal designs allow for the researcher to collect data at equal intervals within the period that the research covers. The research adopted the former approach as the period of focus is the three years covering 2010 -2012 , viewed as at end of year 2012.

However other issues of design include research approach, philosophy, data collection methods, unit of analysis and the instruments used in the study. These are covered in the subsequent content that follows.
3.1.1 RESEARCH APPROACH

The two types of academic research approaches are inductive and deductive (Alajmi, 2012). The inductive approach begins with data collection and then generates theory from the research findings. The deductive approach on the other hand starts with theory that is subjected to rigorous test. This approach generally starts with a broad focus on theory and ideas and tappers down to the specifics. The latter is thus more ameanable to use in the field of natural sciences and quantitative research. The research adopted the deductive approach as it seeks mainly to explore the relationship between ERM (independent variable) and firm performance as represented by return on assets (ROA) and return on equity (ROE). Considering it is a case study there will be descriptive and historical biases to the research as the researcher seeks to point at the factual and correct picture of the institution, population or situation as it is. The historical bias would come through as we try to reconnect the past, establish trends and determine causal relationships.

3.2 RESEARCH PHILOSOPHY

Research is not neutral but exhibit the researcher’s personal interest, values, self beliefs, abilities and assumptions (Neville, 2007). There are three main research philosophies in research, that is, positivism, interpretivism and realism (Alajmi, 2012). Positivists derive knowledge through scientific methods while interpretivism deals with perceptions of people in interaction. Realism shares a belief that the former two methods should apply the same data collection methods and explanations and should commit to accepting that there is an external reality to which scientists focus on. Interpretivists are more concerned with how people perceive the world through interactions. This is because people view facts as a product of interaction. However the drawback, with this method is that it leaves unanswered questions as to why facts are as they are, categorisation of data, issues concerning data (quantitative data) and dealing with complexity (Alajmi, 2012). This drawback calls for the use of positivist approach in trying to establish relationships and causal effects. There was concurrence in Chapter 2 to the fact that the involvement of everyone within the organisation and the
culture within the institutions were at the core of ensuring ERM success. Furthermore, studies carried out so far review the effect of ERM on firm performance by focusing on the signals of the process implementation. This research chooses a different dimension that first seeks to first establish the relationship between ERM and its process components. The findings from this process are then used to corroborate or oppose the result from correlation studies conducted between ERM and the performance of the firm. To achieve this the research thus adopts a positivist approach.

3.3 RESEARCH STRATEGY

The research adopts a single case study strategy. A case study is defined by Yin (2003 p13-14) as "an empirical enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between object of study and context are not clearly evident". Dul & Hak (2008) define a case study as a study in which "one single case or a small number of cases in their real life context are selected, and scores obtained from these cases are analysed in a qualitative manner". However though most case studies are grounded in qualitative techniques, measures as used in surveys and experiments such as questionnaires and quantitative techniques, may also be used in case studies (Dul & Hak, 2008). In line with this assertion, this research thus seeks to adopt a qualitative and quantitative methods in a mixed method approach to unravel underlying dimensions in the case. This is also in support with Meyer (2001) who asserts that there is virtually no specific requirements guiding case studies. The author further states that this allows tailoring the research design and data collection procedures to the research questions. Another strength is that case studies unravel new processes or behaviours or ones that are little understood (Hartley, 1994 as cited by Meyer, 2001). ERM, as unpacked in the literature review, is in its infancy and just gaining impetus hence the use of a case in this research. The objectives in this research carry both quantitative and qualitative dimensions hence the mixed methods techniques will be employed. Such an approach ensures validity and reliability of findings necessary to depress the major weakness of case study; that of producing results that are not generalisable.
The researcher chose the case study mainly for proximity of data and experience within the field of risk management. Observable trends within the organisation, will also be used in this research.

3.4 POPULATION AND SAMPLING TECHNIQUES

Population is the group or units to whom the research is directed towards (Kitchenham & Pfleeger, 2002). It can also be defined in terms of the involvement of variables that have value and qualify to be included in the research Wegner (2007). It was defined by Saunders et al (2009) as the universal of "cases from which a sample is taken". The research is a case study of Ecobank Zimbabwe hence all employees of managerial and non managerial grades formed the population. This follows the direction set by literature which notes that one of ERM goals, is to make risk management everyone's business.

3.4.1 SAMPLING

Sampling is a process of choosing units of study (sample) from a population of interest so that by studying the sample we may fairly generalise the results of the sample to the population from which it was extracted (external validity), (Trochim, 2006). A sample is a group of people, companies or items chosen to be in the study on which data is gathered through measurements, observations and surveys; that is representative of the population of study (Kitchenham & Pfleeger, 2002). The advantages of sampling include but are not limited to:

- Lowers costs associated with data collection;
- data collection is done timeously; and
- enhancement of data precision

The key to the validity of any sampling process lies in how well it represents the population from which it was taken from (Cooper and Schindler, 2003). External validity is the extent to which the truth in research results would hold for other people in other places in other times (Trochim, 2006). However, validity is a function of precision and accuracy (Cooper and Schindler 2003). The latter is the extent to which the sample is
unbiased while the former is statistically determined through the standard error of estimate (Cooper and Schindler 2003).

The two types of sampling methods commonly used are probability and non-probability sampling (Kitchenham & Pfleeger, 2002; Saunders et al, 2009).

3.4.2 PROBABILITY SAMPLING

The probability sampling methods accord each respondent an equal chance of being selected (Cooper and Schindler, 2003). The randomness associated with this technique, increases the representativeness and possible validity of results. The researcher used this technique for this advantage and also the realisation that the results from the sample would be used to make inference to the population as argued by Saunders et al (2003).

3.4.2.1 Simple random sampling

This probability sampling technique affords every sampling unit an equal known probability of being included in the study sample (Kitchenham & Pfleeger, 2002). The researcher used this method in choosing the research sample. This was done through the use of a random number generator in SPSS where each unit was assigned a number. The first 60 people from both managerial and non-managerial staff were then used as a sample in the re-ordered random numbers. Due to the fact that there are more managerial than non-managerial staff in the organisation, the final sample was composed of 35 managers and 25 non managers. The method was chosen due to its applicability to smaller populations, reduction of bias due to randomness and the fact that it accords an equal chance of selection to all units of the population.

3.4.2.2 Judgmental sampling

This is a non-probability sampling technique that relies on the researcher's intuition, experience and professional expertise in choosing a sample (Trochim, 2006). The research is based on a single case study and, for the purposes of data, process and other relevant clarifications, this method was found suitable. The researcher used the
structure of the bank to identify the persons who have the primary responsibility for risk management, thereby choosing the head of risk, compliance officer, head credit risk, head market risk, head operational risk and head internal auditor. These respondents were used in unstructured interviews to qualify certain research points. Thus, judgmental sampling assisted in picking experienced and authoritative people in risk management whose knowledge could not have been obtained from ordinary respondents (Teddlie & Yu, 2007). This neutralised the disadvantage of bias associated with judgemental sampling, also called purposive or authoritative sampling.

3.4.3 SAMPLE SIZE

The sample was drawn from a total of 153 employees consisting of 94 managerial and 59 non-managerial employees. The researcher used random numbers to come up with a sample size of 60 respondents. This was considered adequate by authors, such as Saunders et al (2003), who actually advocate for a figure of 30 observations in order to conduct inferential statistics. Out of these, 35 employees in managerial grades and 25 employees in non-managerial grades were randomly picked in line with the simple random sampling technique as discussed above. However with regards to the observations forming the ERM index, financial performance and the antecedent control variables, only five observations were made, trending the full and half year results of the bank.

3.5 DATA COLLECTION METHODS

The data collected from a research can be quantitative, qualitative or both (Saunders, et al., 2003). Qualitative research is usually defined in terms of focusing on words and not on quantitative data (Bryman & Bell, 2007). The method is however criticised for being subjective, lacking transparency and difficult to repeat. Quantitative research involves collection of data that can be quantified with a capability of being statistically analysed (Anderson, 2004). Statistical analysis usually results in improved validity and reliability of findings and conclusions hence it forms the basis of this research. However, Bryman and Bell (2007) lists the following as criticisms of quantitative method of data collection:
• it is limited to use of numbers
• fails to acknowledge the researcher’s point of view
• researcher remains distant
• it is static
• it is limited to artificial settings
• it is structured and makes generalisations
• requires hard and reliable data
• takes a macroscopic view of behaviour

As a result of the shortcomings in the two methods the researcher used a mixed data collection approach that includes both qualitative and quantitative data. This was done to avoid the limitations of both methods. These data forms can further be classified as primary or secondary data.

3.5.1 PRIMARY DATA

Primary data is data that is collected for the first instance meant for the specific research in question, usually rich in context (Dawson, 2002). The advantage of this type of data is its specificity in purpose, context specific and rich in quality. However primary data is often criticised for the complexity involved in gathering and analysing it as well as the cost of collecting it. The research utilises primary data by employing techniques of survey questionnaires, and unstructured interviews.

3.5.1.1 The Questionnaire

This consists of a list of questions designed to be completed by the chosen respondents (Leung, 2001). In a survey, data is collected from the sample of people and/or organisations chosen. The questionnaire is used to collect the views of attitudinal, perceptive and cognitive nature eventually yielding, mostly quantitative responses (Leung, 2001). The design of this instrument is highly standardised to enhance high response rate. As a result of this, each respondent answers similar questions in a prescribed format (Saunders, et al, 2009). The survey questionnaire in
quantitative research, allows for the following as proffered by Wimmer and Dominick (1994) as cited by Rodriguez, (2010) pp 152:

- The statistics regarding the responses provide the frequency of answers that allow for a quantitative analysis and statistical test of the hypotheses.
- The closed-ended questions allow the comparison of the variables and the possibility of statistical analysis, independently and in combination.
- The structure of the survey and the content of the questions are crucial for getting coverage of the subjects required in the research.
- The number of questions and variables used is limited.
- The codification for quantification is feasible through the survey which is complex in non-structured data gathering tools.
- The respondent is not identified, and different criteria from different people of the organisation reduce the bias in agreement questions and answers.

Thus, the researcher used a questionnaire to collect data in line with the research questions. The structure of the questionnaire allowed for the use of open ended and closed ended questions to provide respondents the opportunity to qualify certain responses where need be. The advantages of this structure, as given by Leung, (2001), are that it accords respondents to provide more information as well as expedite quick completion through ticking the boxes.

**Constructing the questionnaire**

Leung, (2001) asserts that the length of the questionnaire has no standard. However, short and precise questionnaires are likely to attract a higher response rate compared to longer ones. This research employs a questionnaire that uses the Likert scale of the mode of 5 Strongly Agree, 4 Agree, 3Neutral, 2 Disagree and 1 Strongly Disagree. This makes quantification of results and analysis using SPSS easy. As argued by Aaker et.al
1998 as cited by Rodriguez, 2010 pp 156 the Likert scale is used “in order to include the options to the respondents for evaluating the agreement, preference and attitude on the statements that each category has for each variable”. The researcher chose a topic whose issues occur on a day to day basis in organizations and the selected sample of respondents were the ones usually confronted with risk management issues that include internal control, internal audits, risk assessments and board committee decisions. The questionnaire uses mainly closed ended questions in light of the quantitative approach adopted. However, the need to probe further also means that the question should carry a limited number of open ended questions.

3.5.2 ADMINISTERING THE QUESTIONNAIRE

Administering a questionnaire involves the methods used to deliver the instrument to the respondent for them to complete. Leung, (2001) lists these methods as self or interview administered, electronic, postal, e-mail and face to face.

3.5.2.1 Electronic mail administered questionnaires

The researcher utilised the e-mail platform to send and receive completed questionnaires as per methods proffered by (Leung, 2001). This was viewed as a faster and efficient way of obtaining quick responses. The other advantage relates to the reduction of costs due to the limited amount of printing involved. A few respondents however provided printed copies citing use of hard copies as convenient on their part. The branch management and staff face and deal with risk management issues on a daily basis. Due to the distant nature of some branches it became necessary to use the e-mail platform to send and receive back questionnaires. Branches in question include Mutare, Chiredzi, Kwekwe and Bulawayo.

3.5.3 UNSTRUCTURED INTERVIEWS

According to Corbin & Morse, (2003) unstructured interviews involve the coming together of respondents and the interviewer in settings that create an environment that is conducive for "conversational intimacy". The researcher adopted this type of
approach to reduce the level of suspicion that is attached to formal interviews and to enhance disclosure of some information that would otherwise be elusive had any other method been employed. As was alluded to in previous discussion, the main aim of these interviews was to substantiate findings and therefore enhance validity of conclusions.

### 3.5.4 PILOT STUDY

A pilot or feasibility study is a small scale research meant to test the research instruments as well as set delimitations of the research among other intentions (Arain, et al., 2010). The validity of research instruments and development of concise procedures are some of the factors that compromise on the quality of research work. The researcher carried out a pilot study on the questionnaire in order to ascertain whether the target respondents understood the questions and language used. This resulted in the shortening of the instrument from a previous 46 questions to 36 questions. This was done despite the fact that the researcher relied greatly on validated questions from ERM studies conducted by Lam (2007), Lennon (2007), COSO (2004), Rodriguez (2010) and KPMG (2001). The need to engage the highest authorities in these departments came in as a result of different answers obtained from officers in the same department. The pilot study was also used to enhance validity and reliability of the data collection modes as well as the research instruments used.

### 3.5.5 SECONDARY DATA

This refers to the use of pre-existing data or abstraction in the research (Saunders, et al., 2003). Sources of secondary data include management reports, departmental minutes and documented policies and procedures in risk management. The advantage of using this type of data is that it is easily accessible to the researcher, costless and already analysed. The disadvantages include obsolescence and having been collected for other purposes other than the research at hand. The researcher used annual reports, financial statements, departmental meeting minutes as well as management reports to gather secondary data. Secondary data collected was used in the process of triangulation of findings essential in cross checking the findings related to qualitative
and quantitative data. Financial statements were used in the analysis of performance indicators (ROA and ROE), credit quality, operational efficiency, leverage, capital adequacy, income diversification as well as the ERM indicators detailed in section 3.6.2 of the methodology chapter. This yielded ratio data from the period under consideration, 2010-2012.

3.6 RESEARCH PROCEDURE

The research followed a sequential approach in answering the research questions. First was to develop an analysis of the ERM process to unpack whether this was happening as per the assertion in annual reports. The success of this process hinges on the effectiveness of implementing some components of COSO. Therefore we can safely conclude that lack of fit between these, results in non-achievement of objectives; other things being equal. This improves on the previous works of Geessink (2012) that only focused on ERM impact on financial performance.

Secondly, the effect of ERM on performance was then tested mathematically using correlation matrix and regression analyses. The idea behind this was to measure whether there is a relationship between managing risks, the ERM way, and firm performance. The model to be tested was as below:

\[ FP = B_0 + B_1\text{ERM} + B_2\text{CA} + B_3\text{DV} + B_4\text{CQ} + B_5\text{EFF} + B_6\text{LEV} + \text{ERR} \]

where ERM = ERM index

- CA = Tier one capital as a ratio
- DV = level of diversification
- LEV = leverage
- CQ = credit quality/loan quality
- EFF = level of efficiency
- ERR = error term

The method of measurement for these variables is detailed in APPENDIX 6.
3.6.1 MEASUREMENT AND INDICATORS

The definition of the dependent and independent variables for the research took a two pronged approach as borrowed from the work of Tseng (2007). The rationale for this approach lies in the argument that ERM's effect on firm performance is contingent to other factors. While the former used other objectives, this research used the components of the COSO framework. The first instance details the proposition that ERM success is dependent upon the successful implementation of the COSO components through a survey questionnaire involving the employees of the organisation. These variables have been discussed in length in Chapter 2. The second approach uses the firm performance as the dependent variable and ERM as the independent variable with control variables that can also impact positively or negatively on firm performance. The identified control variables include tier-1 capital, diversification, leverage and credit quality. The measurements for these are detailed in the Appendix 4.

3.6.2 ERM INDEX

The ERM index is composed of various building blocks (Geessink, 2012). The calculation of the ERM index borrows from Aebi, et al. (2011) as cited by Geessink, (2012) that was discussed in chapter 2. In this chapter we discuss the calculation methodology for these as were captured in SPSS to provide a composite index used in the analysis. The presence of the CRO or head of risk (HOR) on the board takes the values of 0 and 1 for absence and presence respectively. The presence of a risk committee (Rcm), mandated by the board and an indication of adoption of good risk governance as per King III (2009) principles, assumes a value of 1. Furthermore, the number of sittings of the Rcm, which depicts board monitoring, was used in the analysis taken from financial statements. The board size (BDS) is taken as a natural logarithm. The independence of the board (BODIND) is depicted by the number of directors who are not conflicted by having direct interest in the organisation; a percentage of these is used. The number of independent directors on the risk committee is represented as a percentage. In addition, the financial experience (FEXP) of a director is measured by past or current affiliation with a financial institution. The value used in this instance will be the percentage of directors with FEXP. The reporting lines of the
CRO or HOR depicts the importance of risk management in the organisation. A direct reporting line to the CEO earns a value of 1. The values were observed for the period under review, that is 2010 to 2012.

The values above were converted to z-scores to achieve uniformity and common denominator status to achieve comparability (Rodriguez, 2010).

3.6.3 CONTROL VARIABLES

These are factors that could also have affected the bank’s performance independently or in combination. The measurement method for these variables is detailed in Appendix 4.

3.7 DATA ANALYSIS

The researcher analysed data through the use of a statistical analysis package, SPSS. Qualitative data was manually analysed and common themes developed.

3.7.1 DESCRIPTIVE STATISTICS

The sample statistics were analysed through frequency distribution and histograms. The measures of central tendency - mean, mode, median, and skewness were used where applicable. Then the measures of dispersion, variance, and standard deviation, were also used when factor analysis was conducted. These measures were given for the period under review especially for the control variables and the dependent variable in the model firm performance and ERM as well as for the survey (APPENDIX 8).

3.7.2 MULTI VARIATE REGRESSION ANALYSIS

Regression is a measure of the relationship between the dependent and independent variable in order to establish causality (Geessink, 2012). The research follows a two pronged approach borrowed from the works of Tseng, (2007) by sharing the claim that ERM success or failure is contingent to certain variables. The researcher, through using some of the components, thus used these components in a survey to analyse the factors involved in ERM adoption and then proceeded to find the relationship between ERM
and firm performance statistically. Borrowing from the works of Geessink (2012), Rodriguez (2010) and Tseng (2007), the relationship of ERM and firm performance was seen as dependent on the level of its adoption in the organisation as measured by the attitudes of respondents in the survey questionnaire. Using SPSS, the multiple regression yielded the values of B. The importance of the B to firm performance lie in the signicants of their values and the associated sign. High B values indicate that the variable holds greater influence on firm performance, while positive variables indicate incremental influence on the dependent variable; the reverse of these scenarios is also true.

3.7.3 CORRELATION MATRIX

Correlation measures the strength of the relationship between the dependent and the independent variable (Rodriguez, 2010). In this case correlation was measured against, ERM and firm performance as well as the control variables involved. Multicolineality, a condition where a relationship of dependency and independency exists among the independent variables, was checked among these variables. Geesink (2012), posits that the quantum of influence might be enough to ignore multicolineality, especially if there is significant relationships between the dependent and independent variables. The measure of correlation adopted was Spearman Rho correlation. This was because the data was proven to be skewed (APPENDIX 9), hence not fit for Pearson's correlation coefficient measure (Rodriguez, 2010).

3.7.4 VALIDITY

The validity of results from the discussed modes of analysis is essential in rubber stamping the conclusions to be drawn from the research (Geessink, 2012). The research results will be valid when the “model measures what it was supposed to measure” (Hair et.al, 2003 as cited by Rodriguez, 2010). To check on validity the following was used:

Test for Normality
The researcher used the Shapiro-Wilki test for normality which caters for observations that are below 50 Rodriguez,(2010) for interval and ratio data drawn from financial statements. This also had an influence on the choosing the non-parametric tests for the researcher to use.

3.7.5 RELIABILITY

The reliability of the survey is achieved if the same results are obtained in the event that the same research is repeated using the same methodology (Rodriguez, 2010). The research uses survey questions that were validated by previous researchers. The questions, as previously stated, were largely borrowed from works from Lam (2007), Lennon (2007), COSO (2004), KPMG (2001) and Rodriguez (2010). The questions were subjected to Cronbach’s alpha coefficient test, yielding the required score of 0.7 for acceptability. In addition, Bartlett’s test for sample adequacy was done to prove the significance of the sample (APPENDIX 3). A score of 0.723 was obtained, higher than the threshold of 0.5, for the study to employ factor analysis (Rodriguez 2010).

3.8 ETHICS AND VALUES

The researcher respects the confidentiality in company data and participation in the research was on the basis of willingness by the respondents. Furthermore, the result presented was a result of genuine data collected through questionnaire and published financial statements which are verifiable.

3.9 CONCLUSION

The chapter explored the methodology used in the research and the researcher settled for quantitative method though using mixed methods to collect data was also used. Quantitative data was used and validated through qualitative data in-order to improve validity and reliability of the research results.
CHAPTER 4: RESEARCH FINDINGS AND DISCUSSION

4.0 INTRODUCTION

The chapter presents the research findings and seeks to provide an in-depth analysis of the results in view of the literature in chapter 2. The aim is to answer to the research questions which were derived from the research objectives. The findings will be based on the analysis of responses to the questionnaire as well as the secondary data from financial statements. The chapter will cover the response rate, demographic data, tests of validity and ultimate results and discussion of objective issues.

4.1 RESPONSE RATE

A summary of the response rate is summarised in Table 4.1 below:

Table 4.1: Response Rate

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Number of Responses</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>56</td>
<td>93.33%</td>
</tr>
</tbody>
</table>

Of the 60 employees sampled, 56 of them responded. This represents a 93.33% response rate. The high response rate was attributed to the fact that the researcher is also an employee of the organisation thus making it easy to make constant follow-up.
The 6.67% non-response is due to employees taking leave before completing and returning the questionnaires.

4.2 DEMOGRAPHIC DATA

The researcher included demographic data in order to explore whether certain aspects of demography are pertinent to the process of ERM. The demographic aspects covered were educational qualification, the years of service, the level of employment and the department of work.

4.2.1 Level of Education

Of the total respondents 25% were holders of a certificate or diploma, 48% had an HND or Degree and 26% had a post graduate qualification. The level of qualification's importance lies in the need to comprehend business processes.

4.2.2 Length of Service

This relates to how long a respondent had been under the employment of the bank. The length of service was important in making respondents reflect between the past and the
transitional period under study. Those with longer periods of service provide a check to answering questions than those with shorter periods of service.

Figure 4.2: Employment length

- About 11% of the respondents had served the bank up to 1 year while 20% had been in the bank for up to 2 years.
- Among the respondents, 18% had between 1 and 2 years while the larger proportion of 52% had been in the bank for 5 years and above.
- The length of service was important in making respondents reflect between the past and the transitional period under study.

4.2.3 Level of Employment

The distribution of the respondents was as follows:

Table 4.2: Level of Employment
<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managerial</td>
<td>34</td>
<td>61</td>
</tr>
<tr>
<td>Non-Managerial</td>
<td>22</td>
<td>39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>56</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

About 61% of the respondents held managerial posts while 39% were non-managerial employees. The level of employment carries relevance as the responses of both managers

**4.2.4 Department**

Figure 4.3 below shows the distribution of respondents according to the departments they worked. Of the respondents:

- About 5% belonged to risk and compliance, 2% were from treasury and 7% were from corporate banking
- Approximately 38% and 36% were from domestic banking and operations and technology departments
- Internal audit and finance constituted 9% aggregatively
- The remaining balance of about 5% belonged other departments notably human resources

The results show a spread of research to incorporate the diverse views from different departmental perspectives. This agrees to literature that ERM should involve everyone in the organization Economist Intelligence Unit (2007).
4.3 QUESTIONNAIRE RELIABILITY TEST

The survey instrument was tested for reliability using the Cronba’s Alpha test in SPSS. The result of this test of 0.788 surpasses the 0.7% threshold designated for the instrument to be said to be reliable (Rodriguez, 2010). The results of the test are shown below in Table 4.3:

Table 4.3: Cronbach’s Alpha Test

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th>Cronbach’s Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach’s Alpha</td>
<td>.788</td>
<td>.806</td>
</tr>
<tr>
<td></td>
<td>.806</td>
<td>36</td>
</tr>
</tbody>
</table>
4.4 OBJECTIVE ISSUES

The section answers to the purpose of the research by addressing the research questions.

4.4.1 RISK IDENTIFICATION

Figure 4.4: Bank Risks
- About 70% of the respondents identified market risk, 75% identified credit risk while 93% selected operational risk.
- 75% identified compliance risk, 68% regulatory risk and 46% mentioned strategic risk.
- Other risks, notably political, liquidity, people risk and interest rate risk were identified by 12% of the respondents.
- The results indicate that the employees of the bank were able to identify the core risks of the bank namely market; credit and operational risk. This confirms the first and second classification of bank risks by Greuning & Bratanovic, (2009). However other environmental risks, under the same classification were hardly
mentioned. These and other external risks have been documented by COSO (2004) and argued to be the focus of ERM, as traditional risks are well known.

4.4.1.1 Departmental risks

Of the valid responses, 20% indicated the prevalence of market risk, 36% credit risk and 88% operational risk. About 59% identified compliance risk, 46% regulatory risk and 16% named strategic risk as a risk that is peculiar to their departments. The information is represented in Figure 4.5 below:

The results indicated that respondents identified risks that were idiosyncratic to their respective departments. The discovery, though logical, defies the thrust of ERM which posits that risks are interrelated and should be viewed as such (Greuning & Bratanovic, 2009).

![Figure 4.5: Department Specific Risk](image)

4.4.1.2 Method of Risk Identification

The respondents were asked about the method they use to identify risks in their departments and the results were as shown in Figure 4.6:

- About 66% used daily observation techniques, 63% occurrence of events, and 34% benchmarking.
• The remainder of combined 43% employ peer reviews and brainstorming

![Figure 4.6: Methods of Risk Identification](chart)

The results indicate that there is no single method that the organisation uses to identify risks. However, the occurrence of events had a relatively high response rate implying that the organisation becomes reactive rather than proactive to risk. This runs contrary to the ERM objective of identifying events before they occur, as propounded by authors, among them KPMG (2001).

### 4.4.2 RISK ASSESSMENT

Respondents were asked about the risk assessment within the organisation and the responses were recorded. Figure 4.7 below details the responses:
Figure 4.7: Risk Assessment

- About 39% managerial employees and 29% non-managerial employees confirmed that they conducted risk self assessments.
- The remaining proportion composed of 21% of managerial and 11% non-managerial employees said they did not conduct this process.

The researcher made a follow-up with the risk management department and found out that department heads completed risk self assessments on the intranet on a monthly basis. This explains the higher number of the managerial respondents confirming this and implies the process might be effective. The prevalence of an ineffective risk assessment has been put forward as one of the causes of global financial scandals (Soileau, 2010).

4.4.2.1 Quality of Risk assessment

Respondents were also asked to rate the quality of risk and the responses were summarised in Figure 4.8 below:
• About 57% of respondents agreed that the risk assessment is good, 32% were neutral, 7% strongly agreed while 4% disagreed.

• Approximately 43% agreed that the risk aggregation is good, another 43% were neutral, and 5% disagreed while 2% strongly disagreed.

• On risk mitigation tools, a combined 65% agreed that the tools were good, 34% were neutral while 2% disagreed.

• The research findings indicate that there is an average degree of acceptable risk assessment in the organisation with a higher weighting by mitigation tools. As KPMG (2001) argue, there is no standard mitigation tools prescribed; hence each organisation uses its preferred methods. APPENDIX 2, however, confirms risk assessment variables as notable in explaining the study.

4.4.3 RISK CULTURE

When asked about the existence of a risk culture in the organisation, the respondents gave answers as per Figure 4.9 below:
Figure 4.9: Existence of risk culture

- Approximately 89% confirmed that the risk management culture exists in the organisation while about 10% answered to the contrary.
- Of those who answered yes, 91% were managerial staff while 86% were non-managerial staff.
- A follow-up to qualify the answers given above indicated the existence of awareness programmes and some training on the intranet as why respondents had answered in the affirmative.
- The existence of risk culture and awareness has been cited by the Economist Intelligence Unit (2007) as the major precursor to the success of ERM.
### Table 4.4: Other Risk Cultural Facets

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continued assessment of environment for risk</td>
<td>71%</td>
<td>29%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willingness of people to share risk knowledge</td>
<td>4%</td>
<td>48%</td>
<td>43%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Free environment to discuss results</td>
<td>9%</td>
<td>41%</td>
<td>30%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Diverse people involvement in design of information systems</td>
<td>5%</td>
<td>43%</td>
<td>32%</td>
<td>16%</td>
<td>4%</td>
</tr>
</tbody>
</table>

- There was general agreement with the fact that risk culture is important in enhancing ERM as evidenced by the responses in Table 4.4.
- A combined 100% of respondents agreed that there is need for continued environmental assessment to identify new risks.
- On the willingness of people share risk knowledge, 4% strongly agreed, 48% agreed, 43% were neutral while 5% disagreed.
- A combined 50% of the respondents agreed that there was a free environment to discuss results.
- Regarding the involvement of people in the design of information systems, a combined 43% agreed, 32% were boarder line cases while a combined 20% were in disagreement.

The results generally showed that there is an acceptable risk culture in the organisation as gauged by the number of respondents in agreement with the posed risk cultural questions. This is in line with The Economist Intelligence Unit (2007) who posit that for an ERM programme to succeed, a strong risk culture should exist. Teschner, et al. (2008) also cement this by noting that lack of a strong risk culture had been seen to be the major albatross to the success of ERM in organisations.
4.4.4 INFORMATION AND COMMUNICATION

Respondents were asked about their attitude towards risk information and communication. The results are shown in Figure 4.10 below:

- The results reveal that a combined 37% of the respondents agreed to the existence of good communication between the units and risk management department, 45% were neutral, 16% disagreed while 2% did not respond.
- Regarding communication within departments about risk issues 16% and 48% strongly agreed that this was good, 27% were neutral, and 7% disagreed while 2% did not respond.
- A combined 69% of the respondents agreed to the existence of a good communication environment, 23% were neutral while 7% disagreed.

The success of any ERM program hinges on the effectiveness of communication within the organization's different levels. The results reveal that there is generally good
communication within the bank concerning risk issues. This is in line with the assertion by SCOR (2009) that good communication is a precursor to the successful implementation of an ERM programme. This was also confirmed through factor analysis (APPENDIX 2) that showed that information and communication variables explain more of the study than any other factors as shown by factor loadings.

4.4.4.1 Information

The following results concern the information sharing through the use of the intranet.

Table 4.5: Intranet Information System Support

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Non Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to all applications of risk on intranet</td>
<td>20%</td>
<td>39%</td>
<td>34%</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Intranet providing a problem solving platform</td>
<td>9%</td>
<td>18%</td>
<td>54%</td>
<td>16%</td>
<td>4%</td>
</tr>
<tr>
<td>Provision of interaction between units on risk issues</td>
<td>5%</td>
<td>27%</td>
<td>50%</td>
<td>14%</td>
<td>4%</td>
</tr>
<tr>
<td>Support of risk controls on intranet</td>
<td>11%</td>
<td>41%</td>
<td>34%</td>
<td>11%</td>
<td>4%</td>
</tr>
</tbody>
</table>

- The study showed that a combined 59% generally agree that there is good access to all application of risk management on intranet.
- There was general neutrality to whether intranet provides a platform for problem solving as evidenced by the 54% of middle of the road responses.
- Half of the respondents (50%) were neutral in whether the intranet provides interaction between business units on risk issues.
- An aggregated 52% agreed that intranet supports risk controls. However, 34% were boarder line cases.
The results showed that the bank has a working intranet platform that is used in risk management. The researcher observed that all risks identified in 4.4.1 are uploaded into the intranet by the bank’s group risk management function. Subsequently these become the benchmark risks subject to monthly assessments by the departmental heads or risk owners. APPENDIX 2 confirms that communication is a factor that explains ERM as shown by the variable loading on component one.

- **System Connectivity**

The table below details findings related to the attitudes of respondents with regards to system connectivity and data management.

![Figure 4.11: System connectivity](image)

The results indicate a general indecision about system connectivity and its ability to facilitate adequate support for data management as shown by the relatively higher middle of the road responses.

- About 46% and 34% of respondents were neutral and in agreement with both factors. 14% strongly agreed that the system provided adequate data support while 11% also strongly agreed that solutions were easily created through interdepartmental system connectivity.

- The results indicate a general indecision about system connectivity and its ability to facilitate adequate support for data management as shown by the relatively higher middle of the road responses.
4.4.5 RISK RESPONSE

Respondents gave the below responses regarding the treatment of risks in the organisation:

Table 4.6: Methods of Risk Treatment

<table>
<thead>
<tr>
<th>METHODS</th>
<th>Responses</th>
<th>Percent of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment of Risks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharing</td>
<td>18</td>
<td>19%</td>
</tr>
<tr>
<td>Accepting</td>
<td>8</td>
<td>9%</td>
</tr>
<tr>
<td>Avoiding</td>
<td>29</td>
<td>32%</td>
</tr>
<tr>
<td>Reducing</td>
<td>36</td>
<td>40%</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

- About 34% of the respondents indicated that risks were treated through sharing, 15% indicated that the organisation accepted risks, 55% indicated avoidance and 68% responded that the organisation treated risks through reduction.
- The different responses might be an indication of the different departmental experiences the respondents are drawing from. The researcher's observation indicates that the bank uses a combination of the above methods to treat risks such as insuring and risk participation destined at sharing and reducing risks. However, the methods are in line with those proferred by Makoro (2008).

4.4.5.1 Risk Control

Figure 4.12 below shows that 98% of the respondents recognised procedures as part of the risk controls employed, 46% identified the use of limits while 43% said the organisation utilised processes to control risks.

The findings show that procedures are widely used in the organisation to control risks. However, the researcher observed that the bank employs the three
methods, among other methods, to control the core risks of market, operational and credit risks. The responses show a pattern of the departments where each of the controls manifests itself. KPMG (2001), notes that part of the end to conducting risk assessments is to come up with limits based on the likelihood of risk occurrence.

Figure 4.12: Types of Risk Controls

4.4.6 MANAGING RISKS

The figure 4.13 below shows responses in relation to how respondents thought risks were managed in the bank.
• About half (50%) of the respondents believed that risks were managed as a portfolio. This is in line with literature on ERM which argues that risks should be aggregated and managed as a portfolio (Mikes, 2005).

• Approximately 46% indicated that risk was managed singularly and the remaining 4% indicated that both methods were employed.

• The two findings are both in line with what literature says. Greenbaum (2012) notes that risks in banks are generally managed in a singular method as evidenced by the attention given to market, credit and operational risk through the Basel Accords. However, Bank for International Settlements (2004) urges banks to incorporate a holistic approach to managing risks and have propounded the use of the Economic Capital concept in trying to aggregating bank traditional risks.

• The researcher observed that the bank risk models such as VaR to manage market risk, RAROC and Moodys system used in managing credit risk. Again, this firmly concurs with literature which reiterate that the adoption of ERM did not entail abandoning the traditional methods of risk management (SCOR, 2009).

• Confirmation received from a senior officer in the risk management department, also added that management of risks adopts the "inherent and residual approach".

Figure 4.13: Managing Risks
A majority 96% indicated that the responsibility for risk management lies with every member of the organisation.

Two percent of respondents indicated that risk managers were responsible for risk management while the remaining 2% gave the role to the Head of risk.

The findings indicate the high awareness about risk by the bank's employees, one of the building tenets towards ERM success. This coincides with literature which posits that; ERM success drives its impetus from the culture of making risk every employee's business (Economist Intelligence Unit, 2007 and Teschner, et al., 2008).
4.4.8.1 Board Responsibility

Figure 4.15: The board has a role in risk management

- About 70% strongly agreed that the board played a part in risk management and the remaining 30% generally agreed.
- None of the respondents were in disagreement.

When asked further to clarify the role of the board in risk management, respondents' summarised answers were as follows:
- to define the risk appetite of the organisation
- to set the risk tolerance levels
- risk oversight
- setting of risk strategy

The results indicated that the respondents understood that the ultimate risk responsibility rests with the board. This is in line with King III (2009) principles of risk governance which accords the ultimate responsibility for risk governance to the board. RBZ (2006) guidelines on risk management also make risk oversight a prerogative of the board of directors. Further scrutiny of the annual report for the composition of the risk and audit committee revealed that its composition exclusively has non -
executive, experienced and independent directors. This satisfies the principle regarding independence of risk governance as espoused in King III (2009) report.

4.4.9 RISK MONITORING

The following findings in Figure 4.16 indicate the risk monitoring responsibilities in the bank:

![Figure 4.16: Responsibility for Risk Monitoring](image)

- The findings indicate that about 43% of respondents accord the responsibility for risk monitoring to the head of department.
- Risk managers were identified by 32% of the respondents as the persons responsible for risk monitoring while 11% think the head of risk is responsible.
- The remaining 14% preferred other options ranging from internal audit, internal control and board of directors.
- The results indicate the decentralisation of some risk functions. Desk research indicated that while risk management function is centralised throughout the bank, the ERM perspective has been that of creating risk owners who are the heads of departments. The bank does this through the appointing of departmental risk champions. In addition, the departmental heads are mandated...
to chair the Business Unit Risk Committee (BURC) which convenes every month. This forum is tasked with identifying, reporting, solving and monitoring of risks at a department level. This confirms what was said in literature (Manab, et al., 2010; Greenbaum, 2012; Mikes, 2005) that department heads should assume ownership of their risks and performance measured against successful or unsuccessful management of these risks.

- In addition, the results confirm that the three lines of defence (front office, risk and audit) in risk management, as put forward by Teschner, et al. (2008) do exist in the organisation.

- However, further enquiries with senior risk personnel indicated that these meetings were being held erratically instead of every month.

### 4.4.10 BENEFITS OF ERM

Table 4.3 below indicates whether respondents think whether risk management has benefits or not.

**Table 4.7 : Do you think risk management has benefits**

<table>
<thead>
<tr>
<th>YES</th>
<th>95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>5%</td>
</tr>
</tbody>
</table>

- The majority of the respondents (95%) indicated that risk management had benefits while 5% responded to the contrary. Further probe aimed at inducing the respondents to identify the benefits they thought were brought about by risk management yielded the following responses:

  - reduction of losses
  - minimising possible shocks
  - reducing the degree of hazards
  - effective use of resources
  - enhancing communication
  - supports strategy and business planning
The findings indicate that ERM has benefits. Most respondents might have been driven to answer in the affirmative because they came from an era where failure of risk management in Premier Banking Corporation continuously hampered growth. Though the list above was a summary, the items noted were also mentioned in literature. Kraus & Lehner (2012); IRM (2010) and COSO (2004) all seem to concur with the above benefits. However, compliance, regulatory conformity, and competitive advantage were some of the benefits that were continuously mentioned by authors such as Havenga & Venter (2007) and Nocco, et al. (2006). The researcher observed that there has not been major incidences of non-compliance and defiance of regulatory provisions by the bank since 2010.

### 4.4.11 EFFECTIVENESS OF RISK MANAGEMENT

Respondents were also asked about the effectiveness of ERM in the organisation. Figure 4.17 below summarises the responses:

**Figure 4.17 : ERM effectiveness**

- A combined 52% responded that the programme is very effective
- About 47% (combined) were border line cases
- Approximately 1% indicated that the ineffectiveness of the programme.
The results show that generally ERM is tangible in the organisation as indicated by the number of respondents who answered that it was effective. However, an equally high number seemed indifferent, implying that they might not understand the effectiveness of this programme.

4.5 ERM AND FIRM PERFORMANCE

A combined 78% agreed that ERM increases firm performance and 16% were neutral. Respondents who disagreed constituted 2% and the remaining 4% did not respond.

The results above generally support the various propositions put forward by authors. However, as has been the problem in earlier studies, there is no quantifiable evidence. Notwithstanding, Kraus & Lehner (2012) indicate that benefits might be as well intangible.

Figure 4.18: ERM Increases the Performance of the Bank
The above partly answers the main research question that ERM increases firm performance. However to conclusively answer the question, the researcher goes further and tests this through a model derived from literature used by Geessink (2012).

4.5.1 Bank Performance and ERM (2010 - 2012)

The first step was to build the ERM index using the methodology explained in Chapter 3. To achieve this a principal component analysis was used. Components that explain variability of more than 60% in all the other variables become the principal components that the researcher would constantly check upon. In APPENDIX 2, three components account for about 98% of variability of other factors. This is more than what Geessink (2012) found in his study which initially gave out a PCA of 74.22%. The reason might be the other variables that were dropped from the calculation.

APPENDIX 5 shows the initial matrix with the three components. The general rule is that each component should have a loading of at least three factors to be considered (Geessink, 2012). All components have a loading of three factors therefore satisfying this requirement. A loading is considered on a component if it accounts for at least 0.3% of the variability. In the above, we allocate a variable to a component that it is loading to the most in absolute terms. However, the matrix still exhibits some complex structure. This condition occurs when one component has a loading of 0.4 or higher on more than one component. Two variables, ROA and ROE, exhibit this characteristic and therefore the PCA is done again after removing these variables. The final iteration is exhibited in Table 4.9 below showing the three variables loaded on each component.

Table 4.8: Final Rotated Component

<table>
<thead>
<tr>
<th>Rotated Component Matrixa</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>BOARDSz</td>
<td>.972</td>
</tr>
<tr>
<td>Firm Efficiency</td>
<td>-.253</td>
</tr>
<tr>
<td>Credit Quality</td>
<td>.085</td>
</tr>
</tbody>
</table>
Diversification of income | -.151 | -.177 | .967  
Leverage             | -.366 | .930  | -.034  
Tier 1 Capital       | -.365 | .926  | .046   
Risk Committee       |        |        |        
  independency       | .955  | -.109 | -.271  
Board Financial experience | -.148 | .325  | -.929  
Board Independency   | .981  | -.179 | -.067  

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Therefore we can now substitute the components with the variable they are represented with. To make it easy we take the variable with the highest loading to represent the component. The reason for this is that the variable explains more variability in that component than any other. In this instance component one now becomes ERMBODIND, component two becomes ERMCRDQ and finally component three becomes ERMDIVINC. The highlighted figures are then taken and multiplied by the standardised observations of those variables to come up with the ERM index.

4.5.2 CORRELATION MATRIX

The test of normality done using the Shapiro-Wilk test (APPENDIX 5) yielded a result of 0.018 less than the significance level of 0.05, therefore implying that the observations are not normally distributed. The use of Pearson's correlation did not therefore make sense hence we proceeded by using Spearman's Rho correlation coefficient. The results in Table 4.10 indicate that a significant relationship exists between board independence and return on equity. According to Geessink (2012), the analysis could be used to infer causal relationships due to the lagged nature of the performance variable. In this case we could draw a conclusion that firm performance, as represented by ROE and ROA, is influenced by board independence which in our case is represented by ERMBODIND. Whilst other correlations seem to infer strong relationships, for example operating efficiency and ERMDIVINC, these were not flagged in SPSS as significant.
Table 4.9: Spearman's Rho Coefficient Matrix

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>ROE</th>
<th>ERMBODIND</th>
<th>ERMDIVINC</th>
<th>ERMCRDQ</th>
<th>Operating Efficiency</th>
<th>Tier 1 Capital</th>
<th>Leverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>.632</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ERMBODIND</td>
<td>.632</td>
<td>1.000**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ERMDIVINC</td>
<td>-.667</td>
<td>.000</td>
<td>.000</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ERMCRDQ</td>
<td>.100</td>
<td>.158</td>
<td>.158</td>
<td>.359</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Efficiency</td>
<td>-.700</td>
<td>-.316</td>
<td>-.316</td>
<td>.821</td>
<td>.000</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 1 Capital</td>
<td>-.410</td>
<td>-.406</td>
<td>-.406</td>
<td>.605</td>
<td>.359</td>
<td>.821</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td>-.354</td>
<td>-.559</td>
<td>-.559</td>
<td>.363</td>
<td>.707</td>
<td>.354</td>
<td>.725</td>
<td>1.000</td>
</tr>
</tbody>
</table>

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

Based on the above annotated significance it could be concluded that this research has found a strong correlation between ERM (as represented by board independence) and performance (as represented by return on equity).

4.5.3 MULTIVARIATE REGRESSION

Whilst the correlation results gave out initial conclusions, further tests were conducted through regression analysis. Table 4.10 indicates the results of the model. As alluded to in Chapter 3, the B values are used to determine the direction and significance of the relationship between the dependent and independent variables. The signs before the
values indicate whether the variables influence the dependent variable in a positive or negative way.

Table 4.10: Regression Results

<table>
<thead>
<tr>
<th></th>
<th>ROE</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$ (unstandardised)</td>
<td>$B$ (unstandardised)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.0003</td>
<td>-0.004</td>
</tr>
<tr>
<td>ERMDIVINC</td>
<td>-0.220</td>
<td>-0.819</td>
</tr>
<tr>
<td>ERMBOIND</td>
<td>0.967</td>
<td>0.286</td>
</tr>
<tr>
<td>ERMCRDQ</td>
<td>0</td>
<td>0.029</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.026</td>
<td>-0.452</td>
</tr>
</tbody>
</table>

The results can thus be used to infer causal relationship. The results show another significant positive effect of board independence and ROE. This same variable also has a positive effect on ROA. This means that the more independent the board is, the higher the increase in performance. However diversification (ERMDIVINC) has a negative effect on performance. This confirms literature which attributes proper banking income to net interest income whilst other income streams are viewed to be associated with increased risk taking (Baele, De Jonghe, & Vennet, 2007 as cited by Geessink, 2012). Therefore the correlation results were confirmed; that there is a positive relationship between firm performance and ERM. The model can thus be re-written as:

$$FP = -0.0003 + 0.967BODIND + 0.026LEV - 0.220DIVINC$$

4.6 SUMMARY

The chapter detailed the results of the study and related it to the relevant literature. The researcher also made use of observation and secondary data to qualify results. Salient discoveries were made and these would now be given as conclusions from which necessary recommendations would be drawn in Chapter 5.
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.0 INTRODUCTION

Based on the findings in Chapter 4, conclusions will thus be drawn. The major research question will be answered and recommendations made.

5.1 CONCLUSIONS

The following were the conclusions drawn from the research:

5.1.1 Risk/Event identification

The risk identification in the organisation is acceptable as far as identifying the main traditional or core risks. However, while this is necessary, the thrust of ERM is to be able to identify peculiar risks or events before they happen and manage these holistically. The organisation seems to employ reactive rather than proactive methods of identifying risks as evidenced by the respondents who answered for occurrence of events as a risk identifying technique.

5.1.2 Risk Treatment

The organisation combines different methods of risk treatment as provided for by literature. This infers that each class of risk has its unique way of being treated, for example hazard or non-financial risks are shared by insuring and financial risks are
accepted, reduced or avoided. Furthermore the bank uses procedures extensively as a way of controlling risks.

### 5.1.3 Managing Risks

Risks in the organisation are managed as a portfolio from a central risk management department. However, the implementation of ERM decentralised some risk functions such as risk identification which is now done through BURC meetings and send for final aggregation by the risk department. In addition the risk assessments are done by the risk owners on the intranet. Notwithstanding; there seems lack of accountability of risk issues as these have not been included in performance scorecards.

### 5.1.4 Factors affecting ERM implementation

The bank has a culture of risk management and everyone seems aware of the fact that every member of the institution is responsible for risk management. The communication within departments is good, though not so good between departments. However, there seems to be poor communication between departments and risk management. The use of the intranet as a system for risk management seems to be very low. There was general doubt as to whether the intranet provides a good platform to share risk knowledge. The governance of risk function in the bank is good as measured by the independency of the risk committee, the number of meetings conducted and the direct reporting line by the HOR to the CEO. The risk assessment and aggregation in the bank is also good, an area that has been pointed out as responsible for corporate failures worldwide.

### 5.1.5 ERM and Performance
The major finding was that a relationship exists between ERM and bank performance, as measured by the correlation between the ERM index (represented by Board independence) and bank performance (represented by return on assets- ROE), and proven through regression analysis. However apart from this impact, ERM also has other benefits such as reduction in losses, minimising shock from sudden events, aiding in strategy formulation and increasing compliance.

5.2 RECOMMENDATIONS

The following recommendations were proffered by the researcher to help improve the implementation of ERM in the organisation:

5.2.1 Risk Identification

The bank needs to broaden the risk or event identification scope to curtail the reactive identification technique of using occurrence of events as a method of identifying risks. This can be done through mandatory intranet training on risk management. Questionnaires can also be periodically done to ensure that employees are abreast of the risk management issues within the organisation.

5.2.2 Risk Ownership

There is need to make risk owners (head of departments and risk champions) accountable for the risks that their departments assume through use of the balanced scorecard. Risk management issues should receive considerable weighting so as to make these performance issues. This would enable owners of risks or managers to assume the risk that can be safely absorbed and thus reduce the agency problem. Such a policy would assist in aligning risk-return profiles and ensure there is a payoff befitting this trade off.

5.2.3 Risk Meetings

The bank should broaden the scope for BURC meetings to include shop floor staff. In addition the departmental risks should include a mandatory discussion of risk issues
and these risks advised to the risk management unit. This would improve the risk identification and aggregation function in the bank as well as continue to foster the risk culture that exists in the institution.

5.3 ANSWER TO RESEARCH PROPOSITION

The researcher can conclude that ERM enhances the performance of the bank and also provides other benefits. The evidence for this lies in the findings and conclusions of the research.

5.4 AREAS OF FURTHER STUDY

ERM has been viewed as a relatively new area. Therefore, the researcher proposes the following areas for future research:

- The effect of culture in developing an ERM programme.
- The impact of information technology on ERM development.
- Implementing ERM in emerging markets: bank case study
- Impact of information systems on ERM implementation
REFERENCES


Alajmi, M., 2012. Implementation of ERM as a part of strategic planning processes in the Kuwaiti financial sector using the Balanced Scorecard framework. LONDON, BRUNEL UNIVERSITY LONDON.


FERKOLJ, A., 2010. ENTERPRISE RISK MANAGEMENT ANALYSIS WITH SUGGESTIONS FOR IMPROVEMENT FOR THE SELECTED COMPANY. Ljubljana: University of Ljubljana.

Geessink, L., 2012. ENTERPRISE RISK MANAGEMENT AND BANK PERFORMANCE DURING A FINANCIAL CRISIS. Twente: University of Twente.


IRM, 2010. A structured approach to Enterprise Risk Management (ERM) and the requirements of ISO 31000, s.l.: The Public Risk Management Association.


APPENDICES

APPENDIX 1: Questionnaire

QUESTIONNAIRE

TOPIC
AN ANALYSIS OF ENTERPRISE RISK MANAGEMENT AND ITS BENEFITS TO BANKS IN ZIMBABWE: A CASE OF ECOBANK ZIMBABWE.

My name is Fungai Richard Dzirutwe and I am a student at the University of Zimbabwe. I am carrying out a research on the above subject in partial fulfillment of the Masters of Business Administration (MBA) Degree Programme. I am kindly asking you to answer the following questions that are an essential part of my research project. All the information provided will be used for academic purposes only and will be treated in the strictest confidence. Your unwavering support and cooperation will be greatly appreciated.

I therefore humbly seek commitment of your time to provide as much information and assistance for the research to be a success

Thank you

Date of completion

SECTION A
1. Name of the respondent  (Optional)

2. Highest qualification attained by the respondent.
   □ O" Level □ "A" Level □ Certificate/Diploma □ HND/Degree □ Post Graduate
3. How long have you been employed in the bank?

☐ 0 - 1 year  ☐ ≥ 1 yr ≤ 2 yrs  ☐ 3-5 years  ☐ 5 years and above

4. Indicate your level of employment

☐ Managerial  ☐ Non-Managerial

5. Tick an option that best describes the department you work for in the organization

☐ Risk and Compliance  ☐ Treasury  ☐ Corporate Banking

☐ Domestic Banking  ☐ Operations and Technology  ☐ Internal Audit

☐ Finance / Accounts  ☐ Other (specify)

SECTION B

Enterprise-wide Risk Management (ERM) is generally defined as the management of risks holistically, in an aggregative manner and as a portfolio to achieve organisational objectives and strategic drive. It recognises that risks are intertwined as well as seek to anticipate new environment risks. Please provide the appropriate response by clicking in the boxes or filling in the spaces provided.

1 Identify the bank risks you are familiar with

☐ Market Risk  ☐ Credit Risk  ☐ Operational Risk  ☐ Compliance Risk

☐ Regulatory Risk  ☐ Strategic Risk

☐ Other (specify)

2 Identify the risks specific to your department

☐ Market Risk  ☐ Credit Risk  ☐ Operational Risk  ☐ Compliance Risk

☐ Regulatory Risk  ☐ Strategic Risk

☐ Other (specify)
3  How are these risks being managed?
   □ Singular (silo)    □ as a portfolio
   □ Other (specify)

4  Do you conduct departmental risk meetings?
   □ Yes    □ No

5  Which method do you use to identify the various risks that affect your department?
   □ Brainstorming    □ Benchmarking    □ Peer Reviews    □ Observation
   □ Occurrence of events

6  What happens to the risks identified above?
   □ recorded in register    □ escalated to senior management
   □ solved within the department    □ nothing    □ other (specify)

7  Who monitors the action plan for identified risks?
   □ the head the risk champion □ head of department □ risk managers
   □ other (specify)

8  Who do you think is responsible for risk management in your organisation?
   □ Head of risk □ risk managers □ departmental heads
   □ Senior management □ every employee

9  Do you think risk management has benefits?
   □ YES    □ NO

10 If "yes" what benefits come to your mind?

11 Do you contact risk self assessments
12 Do you have a departmental risk champion?
☐ Yes ☐ NO

13 If "yes" list his/her responsibilities

14 How are risks controlled in your organisation
☐ limits ☐ process ☐ procedures ☐ other (specify)

15 Which method(s) do you employ in managing risks in the bank?
☐ sharing ☐ accepting ☐ avoiding ☐ reducing

16 Do you think the risk management culture exists in the organisation?
☐ Yes ☐ NO

Comment on your answer to the above question

17 In your opinion (on a scale of 5 -1 with 5 being the highest) how effective is Enterprise- wide risk management in the organisation

5 ☐ extremely effective 4 ☐ very effective 3 ☐ Neutral 2 ☐ somewhat effective 1 ☐ not effective

118
Indicate your level of agreement with the below statements

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>The board has a role to play in bank risk management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Risks continue to change and therefore need for continued environmental assessment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>People are willing to share risk knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>The availability of documentation is good</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>There is a free environment to discuss results interdepartmentally</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>The risk mitigation tools are good</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>The risk assessment process is good</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>The risk aggregation analysis is good</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>The system provide adequate data management support</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Solutions are created because of interdepartmental work through system connectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Communication between departments and risk is good</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Communication within the department about risk issues is good</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Communication environment promotes teamwork</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>In the design of risk management information system, people from different risk areas were involved</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Intranet provides access to all applications in risk management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Intranet facilitates interaction in problem solving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Intranet supports interaction among departments in risk management issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Intranet supports risk management controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>ERM increases the performance of the bank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SECTION C**

1. In your opinion what other factors improve the performance of the organisation

2. In your opinion what challenges are there in implementing the various risk measures in the organisation
3 In your opinion how can these be overcome

4 What do you think is the role of the board in bank risk management?

5 Any other comment

**APPENDIX 2: FACTOR ANALYSIS**

<table>
<thead>
<tr>
<th>Component</th>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intranet supports interaction</td>
<td></td>
<td>.870</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intranet supports risk management controls</td>
<td></td>
<td>.836</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intranet facilitates interaction</td>
<td></td>
<td>.801</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good risk aggregation</td>
<td></td>
<td></td>
<td>.864</td>
<td></td>
</tr>
<tr>
<td>Good risk assessment</td>
<td></td>
<td></td>
<td>.785</td>
<td>.358</td>
</tr>
<tr>
<td>Effective ERM in the organisation</td>
<td></td>
<td>.303</td>
<td>.629</td>
<td></td>
</tr>
<tr>
<td>Good communication within departments about risk</td>
<td></td>
<td></td>
<td></td>
<td>.880</td>
</tr>
<tr>
<td>Good communication between departments and risk</td>
<td></td>
<td></td>
<td></td>
<td>.872</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.
APPENDIX 3: Sample Adequacy Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | .723 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 196.758 |
| df | 28 |
| Sig. | .000 |

APPENDIX 4: TOTAL VARIANCE

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>2</td>
<td>2.979</td>
<td>33.100</td>
<td>81.236</td>
</tr>
<tr>
<td>3</td>
<td>1.589</td>
<td>17.659</td>
<td>98.895</td>
</tr>
<tr>
<td>4</td>
<td>.099</td>
<td>1.105</td>
<td>100.000</td>
</tr>
<tr>
<td>5</td>
<td>4.308E-16</td>
<td>4.787E-15</td>
<td>100.000</td>
</tr>
<tr>
<td>6</td>
<td>4.684E-17</td>
<td>5.204E-16</td>
<td>100.000</td>
</tr>
<tr>
<td>7</td>
<td>-1.841E-17</td>
<td>-2.046E-16</td>
<td>100.000</td>
</tr>
<tr>
<td>8</td>
<td>-1.999E-16</td>
<td>-2.221E-15</td>
<td>100.000</td>
</tr>
<tr>
<td>9</td>
<td>-7.325E-16</td>
<td>-8.139E-15</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
APPENDIX 5: TESTS OF NORMALITY

Tests of Normality

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>Return on Equity</td>
<td>.327</td>
<td>5</td>
</tr>
</tbody>
</table>

a. Lilliefors Significance Correction

APPENDIX 6: VARIABLE FORMULAE

DEPENDENT VARIABLES
RETURN ON EQUITY (ROE) = NET INCOME/TOTAL EQUITY
RETURN ON ASSETS (ROA) = NET INCOME/TOTAL ASSETS

INDEPENDENT VARIABLES
TIER 1 CAPITAL ADEQUACY = TIER 1 CAPITAL/RISK WEIGHTED ASSETS
LEVERAGE = TOTAL DEBT/TOTAL ASSETS
CREDIT QUALITY = LOAN LOSS PROVISIONS/TOTAL LOANS
EFFICIENCY = OPERATING EXPENSES /TOTAL OPERATING INCOME
DIVERSIFICATION = NON-NET INTEREST INCOME/TOTAL OPERATING INCOME

APPENDIX 7: INITIAL COMPONENT MATRIX

Rotated Component Matrix

<table>
<thead>
<tr>
<th></th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>BOARDSIZE</td>
<td>-.025</td>
</tr>
<tr>
<td>Firm Efficiency</td>
<td>-.896</td>
</tr>
<tr>
<td>Credit Quality</td>
<td>.157</td>
</tr>
<tr>
<td>Variable</td>
<td>Mean</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Diversification of income</td>
<td>-.963</td>
</tr>
<tr>
<td>Leverage</td>
<td>-.035</td>
</tr>
<tr>
<td>Tier 1 Capital</td>
<td>-.111</td>
</tr>
<tr>
<td>Return on Assets (ROA)</td>
<td>.807</td>
</tr>
<tr>
<td>Return on Equity (ROE)</td>
<td>.661</td>
</tr>
<tr>
<td>Risk Committee independency</td>
<td>.317</td>
</tr>
<tr>
<td>Board Financial experience</td>
<td>.904</td>
</tr>
<tr>
<td>Board Independency</td>
<td>.118</td>
</tr>
</tbody>
</table>

**APPENDIX 8: Descriptive Statistics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Analysis N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good risk assessment</td>
<td>4.3214</td>
<td>.66352</td>
<td>56</td>
</tr>
<tr>
<td>Good risk aggregation</td>
<td>4.5179</td>
<td>.78604</td>
<td>56</td>
</tr>
<tr>
<td>Good communication between departments</td>
<td>4.6429</td>
<td>.92301</td>
<td>56</td>
</tr>
<tr>
<td>Good communication within departments</td>
<td>4.2679</td>
<td>.82000</td>
<td>56</td>
</tr>
<tr>
<td>Intranet facilitates interaction</td>
<td>4.8036</td>
<td>.811842</td>
<td>56</td>
</tr>
<tr>
<td>Intranet supports interaction</td>
<td>4.7679</td>
<td>.76256</td>
<td>56</td>
</tr>
<tr>
<td>Intranet supports risk management controls</td>
<td>4.4821</td>
<td>.83101</td>
<td>56</td>
</tr>
<tr>
<td>In your opinion how effective is ERM in the organisation</td>
<td>4.5536</td>
<td>.89279</td>
<td>56</td>
</tr>
</tbody>
</table>