SCHOOL OF UNDERGRADUATE STUDIES

IMPACT OF CASH FLOW RISK MANAGEMENT ON THE FINANCIAL PERFORMANCE INDICATORS OF SELECTED INSURANCE COMPANIES IN LUSAKA, ZAMBIA

This dissertation is submitted in partial fulfilment of the award of Masters in Financial Risk Management degree of the Zambia Center for Accountancy Services University

By

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Declaration

I, Chishala Joshua Shula, pronounce that this academic study is my personal effort, excluding those accredited. All the foundations, references and texts have been accredited. I acquiesced to the School of Postgraduate Studies in Masters in Financial Risk Management degree of the Zambia Center for Accountancy Services University. It has not been acquiesced before, in whole or part, for any degree or assessment at any University.

Chishala Joshua Shula

C.S…….Signed on April 2024

Dr Geoffrey Mweshi Supervisor

…….Signed on April 2024

Dedications

This study is dedicated to my Lord, Jesus Christ, who has been my shield and support during my studies. I thank you Lord for your presence in my Life. I love you Jesus

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Abstract

This study investigates the influence of risk management practices on the financial performance of four prominent insurance firms operating in Zambia, namely Sanlam Life Insurance, Professional Insurance Corporation Zambia, ZSIC GI, and Prudential Insurance Zambia. The research focuses on assessing the impact of risk management strategies, including financial risk management, operational risk management, and enterprise risk management, on the financial outcomes of these insurance companies. Utilizing a comprehensive analysis of secondary data obtained from financial reports spanning the period from 2018 to 2022, the study employs statistical methods, including regression analysis and ANOVA, to elucidate the relationships between risk management variables and financial performance.

The research objectives encompass a detailed examination of the factors influencing cash flow within the Zambian Insurance Sector, an investigation into the impacts of operational, liquidity, and enterprise risk management on the financial performance of the selected insurance companies, and the proposal of practical solutions for enhancing financial performance in the insurance industry.

Preliminary findings from correlation analysis reveal both positive and negative associations between risk management variables and financial performance indicators. Subsequently, regression models are employed to quantify the strength and direction of these associations, shedding light on the nuanced dynamics between risk management practices and financial outcomes.

The study contributes valuable insights into the specific risk factors that significantly affect the financial performance of insurance firms in Zambia, offering recommendations for strategic risk mitigation and financial planning. These findings are essential for industry practitioners, policymakers, and scholars seeking a deeper understanding of the interplay between risk management practices and financial stability within the Zambian insurance landscape. The results of this research aim to inform evidence-based decision-making and foster sustainable financial practices within the insurance sector.

Keywords: Insurance Penetration, Reinsurance, Capital, and GWP, GDP, Zambia.

List Of Acronyms

ADF	Augmented Dickey-Fuller
ARDL	Autoregressive Distributed Lag
BSAC	British South African Company
COSO	Committee of Sponsoring Organizations
CSO	Central Statistics Office
ECM	Error Correction Model
ERM	Enterprise Risk Management
EU	European Union
FSB	Financial Services Board
GC	Gross Capital
GDP	Gross Domestic Product
GWP	Gross Written Premium
IBEF	India Brand Equity Foundation
IP	Insurance Penetration
IRDAI	Insurance Regulatory and Development Authority of India
MGen	Madison General
NAIC	National Association for Insurance Commissioners
OLS	Ordinary Least Squares
PIA	Pensions and Insurance Authority
PICZ	Professional Insurance Corporation Zambia
PP	Phillips-Perron
ROA	Return on Assets

S&P	Standard and Poor
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
US	United States
ZNIB	Zambia National Insurance Broker
ZRA	Zambia Revenue Authority
ZSIC GI	Zambia State Insurance Corporation general Insurance

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CHAPTER ONE INTRODUCTION

1.1 Introduction

In this introductory chapter, the focus is on the paramount importance of adeptly navigating cash flow risk for insurance firms operating within Lusaka, Zambia. It accentuates the indispensability of such risk management strategies in upholding financial stability and profitability, particularly amidst the backdrop of uncertain economic landscapes and regulatory mandates. Building upon studies by Smith et al. (2018) and Mwamba (2020), this chapter underscores the notable positive influence that robust cash flow risk management protocols can wield over an insurer's capacity to fulfill financial obligations, sustain liquidity, and augment overall financial prowess. By setting the groundwork for an extensive examination of the correlation between cash flow risk management and financial performance metrics, the aim is to furnish invaluable insights aimed at aiding insurers in optimizing their financial standing within Lusaka's dynamically evolving operational milieu.

1.2 Background to the Study

The historical narrative surrounding cash flow risk management and its impact on the financial performance of insurance companies in Lusaka, Zambia, dates back to the late 1990s. Amidst the backdrop of post-democratic governance in Zambia, characterized by the liberalization of the insurance sector, notable shifts occurred, particularly with the transition from state-owned monopolies to increased private participation. Entities such as the Zambia State Insurance Limited (ZSIC GI) and Zambia National Insurance Brokers Limited (ZNIB) yielded ground to a burgeoning landscape of private insurers. The pivotal moment came with the enactment of the Insurance Act of 1997, a legislative milestone coupled with the establishment of regulatory bodies like the Pensions and Insurance Authority (PIA), which laid the groundwork for a more competitive industry framework.

Within this evolving context, effective risk management strategies became imperative for insurers to navigate the terrain of financial stability and profitability. Notably, studies conducted by Smith et al. (2018) and Mwamba (2020) shed light on the crucial role of cash flow risk management in bolstering insurers' capacities to fulfill financial obligations and optimize investment returns. As insurers contended with the intricacies of Lusaka's insurance landscape, strategies such as credit management

and liquidity risk management gained prominence. Additionally, market risk management emerged as a pivotal aspect, exerting influence over financial performance through judicious investment decision-making.

Amidst these transformations, notable insurance companies have played significant roles in shaping the industry landscape. Sanlam Life Insurance, Professional Insurance Corporation Zambia, ZSIC GI, and Prudential Insurance Zambia stand as key players within Zambia's insurance sector, each contributing to the sector's evolution and resilience.

Sanlam Life Insurance, a prominent player, has established itself as a leading provider of life insurance products, catering to diverse client needs. Sanlam Life Insurance Zambia, formerly known as African Life Assurance Zambia, is the leading life insurance company in Zambia with the second highest GWP form a Life insurer of 384 Million kwacha as at 2022 Year end according to the Insurance Industry Report 2022 (IAZ, 2023). They offer a range of insurance products including individual life insurance, group life cover, retirement solutions, medical health insurance, and bancassurance. With a mission to optimise stakeholders value, they are committed to providing first-class underwriting and risk advisory services, and efficient settlement of claims. Their office is located at Zenera Office Park, Corner of Lagos and Lubuto, Rhodes Park Lusaka, Lusaka, Lusaka Province, 10101

Professional Insurance Corporation Zambia, renowned for its innovative solutions, has been pivotal in driving customer-centric approaches within the sector. Professional Insurance Corporation Zambia (PICZ) is the largest general insurance company in Zambia, with a market share of 30%. Established on July 9, 1992, PICZ has grown over the years, expanding its branch network and partnerships throughout the country. Professional Insurance Corporation generated a GWP of 1.205 Billion Kwacha as at 2022 Year end according to the Insurance Industry Report 2022 (IAZ, 2023). They offer a comprehensive range of insurance products, including fire, accident, motor, engineering, marine, aviation, and incidental risks. They offer a comprehensive range of insurance products including agriculture, casualty, marine, motor, and property insurance.

ZSIC GI, a historic institution, has adapted to changing market dynamics, maintaining its relevance through a diversified portfolio of insurance offerings. ZSIC GI General Insurance, a subsidiary of the Industrial Development Corporation (IDC) wholly owned by the government of Zambia, is a leader in the provision of non-life insurance solutions. They offer a wide range of insurance products including car, home, business, and agricultural insurance. ZSIC GI General Insurance generated a GWP of 580 Million Kwacha as at 2022 Year end according to the Insurance Industry Report 2022 (IAZ, 2023). With over 50 years of experience, they are known for their service excellence, professionalism, and integrity.

Prudential Life Assurance Zambia, an indirect wholly-owned subsidiary of UK-based Prudential plc, is a leading provider of health and life insurance, asset management, and financial security in Zambia. With over 175 years of experience, they serve more than 19 million customers in 23 markets across Asia and Africa. They offer long-term savings and protection solutions, including health and life insurance, and retirement benefits. Prudential Life Assurance Zambia generated a GWP of 601 Million Kwacha as at 2022 Year end according to the Insurance Industry Report 2022 (IAZ, 2023). They also provide medical insurance services, including outpatient and inpatient services

In the context of Lusaka's insurance industry, where insurers are exposed to various macroeconomic factors and regulatory requirements, understanding and managing cash flow risks become imperative for long-term success. Mwamba (2020) highlighted the correlation between robust cash flow risk management frameworks and improved financial performance metrics such as profitability ratios, solvency margins, and shareholder value creation for insurance companies in Lusaka

The insurance industry in Zambia has undeniably solidified its position as a cornerstone of the nation's financial landscape, as evidenced by the notable surge in Gross Written Premium (GWP) over the years, as noted by IAZ (2020). From K26,431 million in 2002 to K739.36 million by September 30th, 2018, this exponential growth underscores not only the sector's dynamism but also its remarkable resilience in the face of evolving economic conditions. Such a substantial increase in GWP highlights the industry's ability to adapt and thrive, serving as a testament to its pivotal role in mitigating financial risks and providing stability within the broader economy.

Despite the sector's remarkable growth, challenges persisted, particularly concerning cash flow risk management. Against this backdrop, this research aims to delve into the complex dynamics of cash flow within Lusaka's insurance sector, focusing on underwriting risks and regulatory compliance. By

offering insights into these foundational challenges, the study endeavors to inform strategic decision-making and bolster the resilience of insurance companies in Lusaka, Zambia, ensuring their sustained growth and stability within the dynamic financial landscape.

1.3 Statement of the Problem

The study aims to investigate how cash flow risk management affects the financial performance of insurance companies in Lusaka, Zambia. Specifically, the research will focus on understanding the impact of cash flow risk management practices on key financial performance indicators of insurance companies operating in Lusaka. The problem statement revolves around the need to assess how effectively managing cash flow risks influences the financial stability, profitability, and overall performance of insurance companies in the region.

In Lusaka, Zambia, Sanlam Life Insurance, ranked second in Gross Written Premium (GWP) among life insurers with ZMW 384 million, and Professional Insurance Corporation Zambia (PICZ), holding a 30% market share with a GWP of ZMW 1.205 billion, are significant players in the insurance sector (IAZ, 2023). ZSIC GI General Insurance, recognized for its service excellence, and Prudential Life Assurance Zambia, serving millions of customers, are also key contributors. With a 13% increase in gross written premiums in 2022, reaching ZMW 601 million, understanding the impact of cash flow risk management on financial performance is crucial for these companies. Investigating cash flow risk management practices within Lusaka's insurance sector is paramount to addressing emerging challenges and optimizing financial outcomes.

The problem at hand centers on the impact of cash flow risk management on the financial performance of insurance companies in Lusaka. Specifically, there is a need to understand how effectively managing cash flow risks influences the overall financial health and performance of insurance firms operating in Lusaka, Zambia. Despite the critical role of cash flow management in sustaining the financial stability of insurance companies, there is a lack of comprehensive research focused on this specific aspect within the context of Lusaka's insurance industry. Therefore, there is a pressing need to investigate the relationship between cash flow risk management practices and financial performance metrics, such as profitability, liquidity, and solvency, among insurance companies in Lusaka. This research gap highlights the necessity of conducting a detailed analysis to identify the

challenges and opportunities associated with cash flow risk management in Lusaka's insurance sector and to propose effective strategies for enhancing financial performance and resilience in this context.

1.4 Justification of Research

Justification for this study: Zambia's insurance sector needs to fix its problems right away in order to make it more resilient and improve its total financial performance. The statistical data found in the financial records and business reports makes this project even more important. The Zambia Insurance Regulatory Authority (ZIRA) study from 2021, which shows a lot of denied claims and more customer complaints, shows that the market has basic problems. Also, examining the financial records of big insurance companies shows that their income rates are going down and their cash flow is getting tight, which could mean that the industry might not be able to last (Financial statements Analysis Report, 2022). Our goal in conducting this study is to produce actionable insights and workable solutions to improve cash flow management practices and mitigate these challenges. The ultimate goal of this study is to support the sustainability and growth of Zambia's insurance business, which will help the nation's stakeholders and the general economy.

1.5 Research Aim

The aim of this research proposal is to investigate the impact of cash flow risk management on the financial performance of insurance companies in Lusaka, Zambia, through a multivariate analysis, with a specific focus on assessing the influence of liquidity risk management, operational risk management, and enterprise risk management on the financial performance of these insurance firms.

1.6 Objective of the Study

This study will be guided by both general and specific objectives as follows:

1.6.1 General Objective

To examine how cash flow risk management affects financial performance of top four insurance companies in Lusaka, Zambia (Multivariate Analysis).

1.6.2 Specific Objectives

i. To analyze the key factors influencing cash flow within the Zambian Insurance Sector, including but not limited to premium income, claims payouts, investment income, and operational expenses of Sanlam, PICZ, ZSIC GI and Prudential in Lusaka, Zambia.
ii. To evaluate the quantitative impact of operational, liquidity, and enterprise risk management practices on specific financial performance metrics, such as return on assets (ROA), return on equity (ROE), current ratio, and solvency ratios, for Sanlam, PICZ, ZSIC GI and Prudential in Lusaka, Zambia, from 2018-2022.
iii. To formulate and execute actionable strategies and recommendations aimed at enhancing the financial performance of Sanlam, PICZ, ZSIC GI and Prudential in Lusaka, Zambia, based on the findings and insights obtained from the analysis conducted in objectives (i) and (ii).

1.7 Research Questions

iv. What are the key factors influencing cash flow within the Zambian Insurance Sector, including but not limited to premium income, claims payouts, investment income, and operational expenses of Sanlam, PICZ, ZSIC GI and Prudential in Lusaka, Zambia?
i. What is the quantitative impact of operational, liquidity, and enterprise risk management practices on specific financial performance metrics, such as return on assets (ROA), return on equity (ROE), current ratio, and solvency ratios, for Sanlam, PICZ, ZSIC GI and Prudential in Lusaka, Zambia, from 2018-2022?
v. What are the actionable strategies and recommendations aimed at enhancing the financial performance of Sanlam, PICZ, ZSIC GI and Prudential in Lusaka, Zambia, based on the findings and insights obtained from the analysis conducted in objectives (i) and (ii)?

1.8 Scope of the Study

This study will specifically investigate the influence of cash flow risk management on the financial performance of four prominent insurance companies in Lusaka, Zambia: Sanlam Life Insurance, Professional Insurance Corporation Zambia (PICZ), ZSIC GI General Insurance (GI), and Prudential Life Assurance Zambia. The analysis will be conducted over a five-year period from 2018 to 2022, focusing on factors such as operational, liquidity, and enterprise risk management within these companies. By delving into the strategies employed by these insurers and their impact on financial

outcomes, the study aims to offer valuable insights for both the companies and stakeholders in the Zambian insurance sector.

1.9 Research Contributions

The primary aim of this study is to advance the fields of financial risk analysis and insurance management, specifically within Zambian insurance companies. Through an in-depth examination of cash flow management dynamics among insurers operating in Lusaka, Zambia, the research aims to address existing gaps in the literature regarding the challenges and opportunities unique to this region (Aebi, Sabato, & Schmid, 2012). By providing a comprehensive understanding of the factors influencing cash flow trends and their impact on insurers' financial success, this study seeks to develop a model for measuring and mitigating cash flow risks in the Zambian insurance industry (Born, Lin, & Wen, 2014). This model will offer practical strategies for enhancing cash flow management practices and reducing financial risks, thereby assisting insurers in Lusaka to optimize their operations and improve overall financial performance. Additionally, the study aims to contribute to policy discussions and regulatory reforms aimed at strengthening the stability and resilience of the insurance industry in Zambia, ultimately fostering continued growth and development within the sector, to benefit both insurers and customers (Pensions Insurance Authority Report, 2021).

1.10 Research approach and method

The research approach and method section delineate the methodological framework utilized to examine the correlation between risk management practices and financial performance within the insurance sector. Employing a blend of quantitative and qualitative methods aligned with the research objectives, the study seeks to offer a comprehensive comprehension of the subject matter. Quantitative methods will be employed to scrutinize numerical data pertaining to financial metrics and risk indicators, while qualitative approaches will delve deeper into the underlying factors influencing cash flow risk management decisions and their repercussions on financial performance. Under the deductive approach, hypotheses drawn from existing theories and literature will be systematically tested to explore the relationship between cash flow risk management practices and financial performance indicators within the insurance sector.

This structured investigation, facilitated by quantitative data collection methods and statistical analyses like regression and correlation, aims to rigorously test these hypotheses using empirical

evidence from audited financial statements of insurance companies in Lusaka, Zambia. Conversely, the inductive approach involves uncovering emergent themes and patterns within the data without predefined hypotheses, fostering a deeper understanding of the complexities inherent in the relationship between cash flow risk management and financial performance. By allowing for the discovery of new insights and perspectives, the utilization of both deductive and inductive approaches ensures a comprehensive analysis of the impact of risk management practices on financial performance, enriching the understanding of dynamics within the insurance sector.

1.11 Data collection and analysis techniques

The data collection methods for this study involve accessing and reviewing published reports from the Lusaka Stock Exchange (LUSE) and audited financial statements submitted to the Pensions and Insurance Authority (PIA) between 2018 and 2022, ensuring a comprehensive collection of financial data for analysis. Supplementary information on industry trends and regulatory frameworks will be gathered from relevant journal articles and policy documents (Smith, 2018).

Financial metrics such as annual net income, total liabilities, claims incurred, premium earned, premium ceded, total assets, current assets, and liabilities will be extracted from these sources, aligning with the study's quantitative nature and relevance (Kothari, 2011). Software such as Excel, STATA, SPSS, and Python will be employed to conduct various diagnostic tests, including normality, multicollinearity, and autocorrelation assessments. The Shapiro-Wilk test will evaluate normality, while a multicollinearity test using the Variance Inflation Factor (VIF) will ensure unbiased data collection. NVIVO software will be utilized for qualitative data analysis, ensuring a comprehensive examination of qualitative aspects.

For data analysis and presentation, Statistical Package for the Social Sciences (SPSS) version 24 will be used to analyze trends and specific results. Pearson's correlation analysis at a 95% confidence interval and a 5% confidence level (2-tailed) will measure the strength of links between factors (Field, 2013). Analysis of variance (ANOVA) will establish relationships among variables, while multiple regression analysis will assess data and connections between variables (Hair et al., 2019). The regression equation will specifically be utilized to understand the effect of factors like financial risk management, operating risk management, corporate risk management, and firm size on the financial

performance of insurance businesses, providing valuable insights for policymakers, practitioners, and scholars in the insurance industry.

1.12 Dissertation Layout

Chapter 1: Introduction which is the introduction Introduces background, research problem, questions, objectives, rationale, scope, and structure overview.

Chapter 2: Literature Review focuses to Presents theoretical frameworks, cash flow risk management, financial metrics, and the risk-management-financial performance relationship.

Chapter 3: Research Methodology seeks to describe details research philosophy, approach, design, data collection, analysis techniques, ethics, and limitations.

Chapter 4: Data Analysis and Findings focuses Conducts data analysis, presents statistics, performs hypothesis testing, and discusses findings.

Chapter 5: Discussion & Summary looks to Summarizes findings, discusses implications, highlights contributions, and acknowledges limitations.

Chapter 6: Conclusion - Recaps study, provides answers, offers recommendations, and suggests future research directions.

1.13 Chapter summary

The chapter outline begins with an introduction that sets the context for the study, followed by a background to provide a historical overview of the research topic. The statement of the problem identifies specific challenges addressed by the research, while the justification of research explains the significance and rationale behind conducting the study. The research aim clearly states the overarching goal, leading into the objective of the study, which defines both the general and specific objectives. Research questions are formulated to guide the inquiry, and the scope of the study delimits the boundaries and parameters. Research contributions highlight the potential impact and contributions to the field, followed by a description of the research approach and method employed. Finally, data collection and analysis techniques detail the methods used for collecting, presenting, and analyzing data.

CHAPTER TWO LITERATURE REVIEW

2.1 Introduction

The literature review offers a thorough study of risk management practices and their effects for financial success within the insurance sector, focused on how these practices impact the financial health of insurance companies in Lusaka, Zambia. It includes important aspects such as profitability, solvency, and liquidity measures, alongside academic frameworks such as the Theory of Risk Management, Enterprise Risk Management, Contingency Planning Theory, and Multivariate Theory. Additionally, it covers past views on risk management, key sources of financial trouble in insurance companies, and changes in liquidity risk management between banks and insurance sectors. The review also underscores the strategic importance of successful business risk management and the value implications of Enterprise Risk Management adoption. Research gaps found include the lack of studies on risk management and financial success, regional underrepresentation, and limited methodological variety.

2.2 Financial Performance Metrics

In this subsection, we examine various financial performance metrics essential for assessing companies' resource utilization efficiency and earnings generation. Beginning with profitability measures like Return on Equity (ROE) and Return on Assets (ROA), which indicate a company's profitability concerning shareholders' equity and total assets respectively (Bajaj & Vijayakumar, 2016), these metrics offer insights into a company's ability to generate returns for shareholders and effectively utilize assets for earnings. Additionally, we discuss solvency measures such as the Debt-to-Equity Ratio and Interest Coverage Ratio, which evaluate a company's long-term financial health and resilience by analyzing its capital structure and capacity to fulfill debt obligations (Eckles, Hoyt, & Miller, 2014).

Lastly, we discuss liquidity measures, such as the Current Ratio and Quick Ratio, which assess a company's ability to meet short-term financial obligations promptly and efficiently by evaluating its liquidity position and short-term asset management (Mirie, 2015). Overall, these financial performance metrics provide valuable insights into different aspects of a company's financial health,

guiding stakeholders in making informed decisions regarding investment, financing, and strategic planning initiatives.

2.2.1 Profitability Measures: Return on Equity (ROE) and Return on Assets (ROA)

Profitability metrics are crucial for assessing a company's financial performance and its ability to generate earnings efficiently. Return on Equity (ROE) is particularly significant, offering insights into a company's profitability relative to its shareholders' equity. It reflects how effectively the company uses shareholder funds to generate profits, making it vital for investors and stakeholders evaluating performance (Bajaj & Vijayakumar, 2016). Calculated by dividing net income by average shareholders' equity, ROE provides a comprehensive view of the company's ability to generate returns for its shareholders, influencing investment decisions and strategic planning.

Similarly, Return on Assets (ROA) assesses a company's profitability in relation to its total assets, indicating its operational effectiveness and resource management (Mirie, 2015). Computed by dividing net income by average total assets, ROA reflects the company's ability to generate profits relative to its asset base. A higher ROA suggests effective asset utilization, enhancing overall financial performance and competitive position. Both ROE and ROA are pivotal in evaluating profitability and guiding strategic decisions aimed at maximizing shareholder value.

2.2.2 Solvency Measures: Debt-to-Equity Ratio and Interest Coverage Ratio

Solvency measures play a critical role in assessing a company's long-term financial health and resilience. Among these measures, the Debt-to-Equity Ratio offers valuable insights into the company's capital structure and financial leverage. This ratio compares a company's debt to its shareholders' equity, providing stakeholders with a clear understanding of the extent to which the company relies on debt financing (Bajaj & Vijayakumar, 2016). A higher Debt-to-Equity Ratio suggests a higher level of financial risk, as it indicates a greater proportion of debt relative to equity in the company's capital structure. This heightened reliance on debt financing may increase the company's vulnerability to economic downturns and interest rate fluctuations, potentially impacting its long-term financial stability and ability to meet its obligations.

In contrast, the Interest Coverage Ratio offers insights into the company's ability to service its debt obligations with its operating earnings. By comparing earnings before interest and taxes (EBIT) to

interest expenses, this ratio indicates the company's capacity to cover its interest costs comfortably (Born, Lin, & Wen, 2014). A higher Interest Coverage Ratio signifies greater financial stability and a lower risk of default, as it suggests that the company's earnings are sufficient to meet its interest obligations. This not only instills confidence in creditors but also enhances the company's ability to access additional financing at favorable terms. Overall, solvency measures such as the Debt-to-Equity Ratio and Interest Coverage Ratio provide valuable insights into a company's financial risk profile and long-term viability, guiding investment decisions and strategic planning initiatives aimed at ensuring financial stability and sustainability.

2.2.3 Liquidity Measures: Current Ratio and Quick Ratio

Liquidity measures play a crucial role in assessing a company's ability to fulfill its short-term financial obligations promptly and efficiently. Among these measures, the Current Ratio offers valuable insights into the company's liquidity position by comparing its current assets to its current liabilities (Bajaj & Vijayakumar, 2016). A Current Ratio greater than 1 indicates that the company has sufficient liquid assets to cover its short-term debts, signaling robust liquidity management. Conversely, a ratio less than 1 suggests potential liquidity constraints, as the company may struggle to meet its immediate financial obligations with its current assets alone.

In addition to the Current Ratio, the Quick Ratio, also known as the Acid-Test Ratio, provides further insights into the company's liquidity position by focusing on its most liquid assets excluding inventory (Samamba, 2019). By excluding inventory from the calculation, the Quick Ratio offers a more conservative assessment of the company's ability to meet its short-term obligations with readily available assets. A Quick Ratio greater than 1 indicates a strong liquidity position, as the company possesses sufficient liquid assets, excluding inventory, to cover its short-term liabilities. Conversely, a ratio less than 1 may suggest potential liquidity challenges, highlighting the need for careful management of short-term cash flow needs and working capital.

Overall, liquidity measures such as the Current Ratio and Quick Ratio provide valuable insights into a company's financial flexibility and ability to manage short-term cash flow needs effectively. By monitoring these ratios closely, stakeholders can assess the company's liquidity position and make informed decisions regarding investment, financing, and strategic planning initiatives aimed at maintaining optimal liquidity levels and ensuring financial stability.

2.3 Risk Management and Financial Performance

The part on Risk Management and Financial Performance offers a thorough study of how risk management techniques affect the financial performance of insurance businesses. It discusses the historical viewpoint on risk management (Standard & Poor, 2012) and measures the effect of modern risk management methods on financial results (Ajupov et al., 2019). Key sources of financial trouble in insurance companies are found (Eckles, Hoyt, & Miller, 2014), putting light on the strategic importance of effective risk management in protecting financial stability and resiliency.

2.3.1 Historical Perspective on Risk Management

The historical evolution of risk management spans centuries, reflecting the gradual recognition of the importance of identifying, assessing, and mitigating risks to achieve financial stability and resilience. Throughout history, various civilizations and societies developed rudimentary risk management practices to cope with uncertainties and safeguard their economic interests. For instance, ancient maritime traders utilized risk-sharing arrangements to mitigate losses from shipwrecks and piracy, laying the foundation for modern insurance principles (Michaels, 2003).

Over time, risk management evolved in response to changing economic landscapes, technological advancements, and regulatory frameworks, culminating in the establishment of formal risk management disciplines in the modern era (Yemane & Raju, 2015). Today, risk management encompasses a diverse range of methodologies, tools, and practices aimed at proactively managing risks across different industries and sectors, including the insurance industry. Understanding the historical context of risk management provides valuable insights into its evolution and highlights the enduring importance of effective risk management practices in achieving financial performance objectives (Arif & Showket, 2015).

2.3.2 Impact of Risk Management Practices on Financial Performance

The impact of risk management practices on financial performance is a subject of significant interest and debate among scholars, practitioners, and policymakers. Effective risk management practices are widely recognized as essential for enhancing financial performance by minimizing the adverse effects of uncertainties and maximizing opportunities for value creation (Culp, 2001).

By systematically identifying, assessing, and mitigating risks, companies can reduce the likelihood and severity of adverse events, such as financial losses, operational disruptions, and regulatory non-compliance. Moreover, robust risk management practices enable companies to capitalize on emerging opportunities, optimize resource allocation, and enhance strategic decision-making processes, thereby improving overall financial performance (Hoyt & Liebenberg, 2011).

However, the precise impact of risk management practices on financial performance may vary depending on various factors, including industry dynamics, organizational culture, regulatory requirements, and macroeconomic conditions (Ajupov, Sherstobitova, Syrotiuk, & Karataev, 2019). Consequently, empirical research and case studies are essential for understanding the nuanced relationship between risk management practices and financial performance outcomes in different contexts.

2.3.3 Key Sources of Financial Distress in Insurance Companies

Insurance companies face a myriad of risks that can lead to financial distress and undermine their long-term viability and sustainability (Mirie, 2015). Key sources of financial distress in insurance companies include poor liquidity management, underpricing of insurance products, inadequate reserves for claims payments, excessive tolerance for investment risk, governance and administrative issues, and challenges associated with rapid growth and diversification into non-core activities (Lam, 2003).

Poor liquidity management, for example, can expose insurance companies to liquidity crises, impairing their ability to meet policyholder obligations and eroding investor confidence. Similarly, underpricing of insurance products can lead to inadequate premium income relative to claims liabilities, resulting in underwriting losses and financial instability (Liang & Ma, 2018).

Effective risk management practices are essential for addressing these key sources of financial distress and ensuring the long-term financial health and resilience of insurance companies (Eckles, Hoyt, & Miller, 2014). By implementing prudent risk management strategies, insurance companies can mitigate these risks, enhance their financial performance, and sustainably create value for policyholders, shareholders, and other stakeholders.

2.4 Liquidity Risk Management

The writing on liquidity risk management offers insights into the strategic importance of keeping suitable cash levels within insurance businesses (Ai, Bajtelsmit, & Wang, 2016). It studies how liquidity management techniques impact financial stability and business resilience, particularly in changing market settings.

Scholars like Eckles, Hoyt, and Miller (2014) stress the importance of liquidity risk management in reducing cash problems and ensuring the ongoing running of insurance companies. This topic is important for knowing the unique challenges and tactics involved in managing cash within the insurance industry.

2.4.1 Importance of Liquidity Management in Insurance

Liquidity management is of paramount importance in the insurance sector due to its role in ensuring financial stability, meeting policyholder obligations, and maintaining regulatory compliance. Unlike banks, which primarily focus on managing short-term liquidity needs arising from deposit withdrawals and interbank transactions, insurance companies face unique liquidity challenges stemming from the timing and unpredictability of insurance claims (Eckles, Hoyt, & Miller, 2014).

Insurance companies collect premiums from policyholders upfront but may not pay out claims until some point in the future (Mirie, 2015). Therefore, effective liquidity management is essential to ensure that insurance companies have sufficient cash reserves to meet policyholder obligations promptly. Inadequate liquidity management can expose insurance companies to liquidity crises, leading to delays in claim payments, reputational damage, and regulatory sanctions.

Moreover, liquidity risk in the insurance sector can be exacerbated by factors such as changes in interest rates, investment market volatility, and unexpected catastrophic events, underscoring the need for robust liquidity risk management frameworks (Meredith, 2014). By implementing prudent liquidity management practices, insurance companies can enhance their financial resilience, protect policyholder interests, and uphold market confidence.

2.4.2 Differences between Banking and Insurance Sectors in Liquidity Risk

While both banking and insurance sectors encounter liquidity risk, there exist notable distinctions in the type and scale of liquidity risk exposures inherent to each industry. Banks commonly partake in

a high volume of daily cash transactions, encompassing deposits, withdrawals, and interbank transfers, resulting in immediate and relatively predictable liquidity requirements (Eckles, Hoyt, & Miller, 2014). Conversely, insurance firms typically gather premiums periodically and disburse claim payments irregularly, resulting in less frequent yet potentially larger liquidity needs. Furthermore, the liquidity profiles of banks and insurance companies diverge concerning asset composition and cash flow patterns (Yemane & Raju, 2015).

Banks prioritize the allocation of a substantial portion of their assets to highly liquid instruments like cash reserves and short-term securities, ensuring readiness to fulfill deposit withdrawals and interbank settlement needs. Conversely, insurance enterprises allocate premiums towards longer-term investments, including bonds, equities, and real estate, aiming to accrue returns over time and satisfy future claim commitments (Ahaneku, 2018). These divergences in asset distribution and cash flow behaviors contribute to the distinct liquidity risk landscapes observed in banking and insurance sectors. Consequently, strategies for managing liquidity risk must be custom-tailored to address the unique liquidity-related hurdles and operational dynamics specific to insurance firms, accounting for their distinct business models, asset-liability structures, and regulatory contexts (Odhiambo & Waiganjo, 2014).

2.5 Operational Risk Management

Operational risk management is a vital aspect of organizational control, especially within the insurance business, where companies are exposed to numerous operational threats. This piece covers the vast range of risks involved in insurance operations, including those related to processes, systems, and human factors. Scholars such as Erkens, Hung, and Matos (2012) stress the strategic necessity of effective operational risk management in saving assets and keeping smooth corporate operations. Operational risk management strategies are vital for improving financial steadiness and sturdiness, so adding to long-term firm success.

2.5.1 Overview of Operational Risks in Insurance

Operational risks in the insurance sector encompass a wide range of potential threats arising from internal processes, systems, people, and external events that can disrupt business operations and undermine financial performance. These risks include but are not limited to, errors or omissions in

underwriting and claims processing, inadequate internal controls, technology failures, regulatory compliance breaches, fraud, and legal disputes (Erkens, Hung, & Matos, 2012).

Insurance companies encounter distinctive operational hurdles stemming from the intricate nature of their products, reliance on actuarial data and models, and the management of extensive policy portfolios with diverse risk profiles (Lundqvist & Vilhelmsson, 2018). These challenges expose insurers to various operational risks, including errors in policy administration, delays in claims processing, lapses in customer service, and cybersecurity breaches, all of which jeopardize their financial robustness, reputation, and market competitiveness (Laeven & Perotti, 2010). Thus, it becomes imperative for insurance firms to adopt proactive measures to identify, evaluate, and mitigate operational risks effectively, ensuring the continuity of their business operations, safeguarding policyholder interests, and complying with regulatory mandates.

2.5.2 Strategic Importance of Effective Operational Risk Management

Strategic operational risk management holds significant importance for insurance companies in attaining their business goals, refining operational effectiveness, and sustaining competitiveness in the market (Erkens, Hung, & Matos, 2012). Through the identification and mitigation of operational risks, insurers can decrease the likelihood of costly mistakes, streamline processes, and elevate customer satisfaction levels. Furthermore, robust operational risk management frameworks empower insurers to fortify internal controls, minimize the occurrence and impact of operational setbacks, and showcase adherence to regulatory mandates and industry benchmarks (Ai, Bajtelsmit, & Wang, 2016).

Additionally, proactive risk management can help insurers anticipate and adapt to changes in the business environment, such as technological advancements, regulatory reforms, and evolving customer preferences, thereby enhancing their agility and resilience in the face of uncertainty (Ai, Bajtelsmit, & Wang, 2016). Ultimately, effective operational risk management contributes to insurers' long-term success by protecting their reputation, preserving shareholder value, and ensuring sustainable growth in an increasingly competitive and dynamic marketplace.

2.6 Enterprise Risk Management

A full method for finding, studying, and reducing risks in all parts of an organization's action is called enterprise risk management, or ERP (Lundqvist & Vilhelmsson, 2018). ERM is important to the insurance industry's control of the vast range of risks involved with insurance-related operations. ERM is thorough, according to Lundqvist & Vilhelmsson (2018), they stress how it may increase an organization's long-term worth and security. Insurance companies may enhance their financial success and competitive standing by adopting ERM principles, which will also help them control resources more effectively, improve their decision-making processes, and proactively handle new risks.

2.6.1 Definition and Scope of ERM

Consistent with Stulz (2013) Enterprise Risk Management (ERM) encompasses a systematic and integrated approach to identifying, assessing, prioritizing, and managing risks across all facets of an organization, including strategic, operational, financial, and compliance risks (COSO, 2011). Unlike traditional risk management approaches that focus on siloed risk categories or departments, ERM adopts a holistic perspective that considers the interconnectedness of risks and their potential impact on the organization's objectives and performance.

ERM aims to create value by enabling organizations to proactively identify opportunities and threats, optimize risk-reward trade-offs, and enhance decision-making processes at all levels of the organization (Stulz, 2013). By embedding risk management into strategic planning, business processes, and governance structures, ERM helps organizations anticipate and respond effectively to changes in the internal and external environment, thereby enhancing resilience and sustainability.

2.6.2 Value Implications of ERM Adoption in Insurance Companies

The adoption of ERM in insurance companies has significant value implications, both in terms of enhancing risk management effectiveness and driving financial performance (Arif & Showket, 2015). Studies have shown that insurance companies that implement ERM practices experience a reduction in risk per dollar expended on risk management activities, leading to improved risk-adjusted returns (Eckles, Hoyt, & Miller, 2014). Moreover, companies with mature ERM frameworks tend to exhibit lower stock price volatility and higher firm value compared to their peers (Che & Liebenberg, 2017).

ERM, or Enterprise Risk Management, offers insurance companies a comprehensive approach to understanding and handling their risk exposures, thus optimizing capital allocation and bolstering underwriting profitability (Ahaneku, 2018). Moreover, by integrating risk management seamlessly into strategic decision-making processes, ERM aids insurers in identifying emerging business prospects, fortifying their competitive stance, and fostering sustainable growth amidst evolving market dynamics (Ahaneku, 2018). Consequently, the adoption of ERM is not merely a regulatory obligation but also a strategic necessity for insurance firms aiming to augment shareholder value, instill confidence among stakeholders, and ensure enduring prosperity in an ever-changing and demanding business milieu.

2.7 Theoretical Framework

A theoretical basis for appreciating the challenging link between risk management approaches and financial success in the insurance sector is offered by the theoretical framework. Important theories that offer insight on how organisations understand, manage, and respond to risks include the Theory of Risk Management, Enterprise Risk Management Theory, Contingency Planning Theory, and Multivariate Theory (Ajupov et al., 2019; COSO, 2011; Pearson, 1901).

These theories are produced with help from professionals such as Karl Pearson, COSO, and Ajupov et al., who stress how crucial these theories are for understanding the processes of risk management and how it effects financial results. Through the use of theoretical views, researchers may obtain a deeper understanding of the intricate links that occur between financial performance measurements and risk management techniques. This may lead to more informed decision-making and strategy planning within the insurance organisation.

2.7.1 Enterprise Risk Management Theory

Designed by Committee of Sponsoring Organizations (COSO) originally created an enterprise risk management (ERM) model in 1992 which was shaped like a pyramid and focused on the evaluation of existing controls (COSO, 2004). As stated by Ai, Bajtelsmit, & Wang (2016), they articulate that ERM is the comprehensive process aimed at addressing an organization's exposure to uncertainty, with a specific focus on identifying and managing events that could potentially obstruct the organization from achieving its objectives. ERM, being a managerial concept, applies across all levels of an organization.

In the context of this study, the theory of Enterprise Risk Management (ERM) is highly relevant as it provides a structured framework for systematically managing all risks encountered by insurance companies in Lusaka, Zambia. By adopting ERM principles, insurance companies can effectively identify, assess, and mitigate risks, thereby safeguarding their financial stability and sustainability. Additionally, ERM enables insurance companies to enhance their decision-making processes, optimize resource allocation, and proactively address emerging risks in the dynamic insurance market. Thus, the theory of ERM serves as a guiding framework for exploring the impact of risk management practices on the financial performance of insurance companies in Lusaka, Zambia, offering valuable insights into strategic approaches to mitigate risks and achieve long-term success.

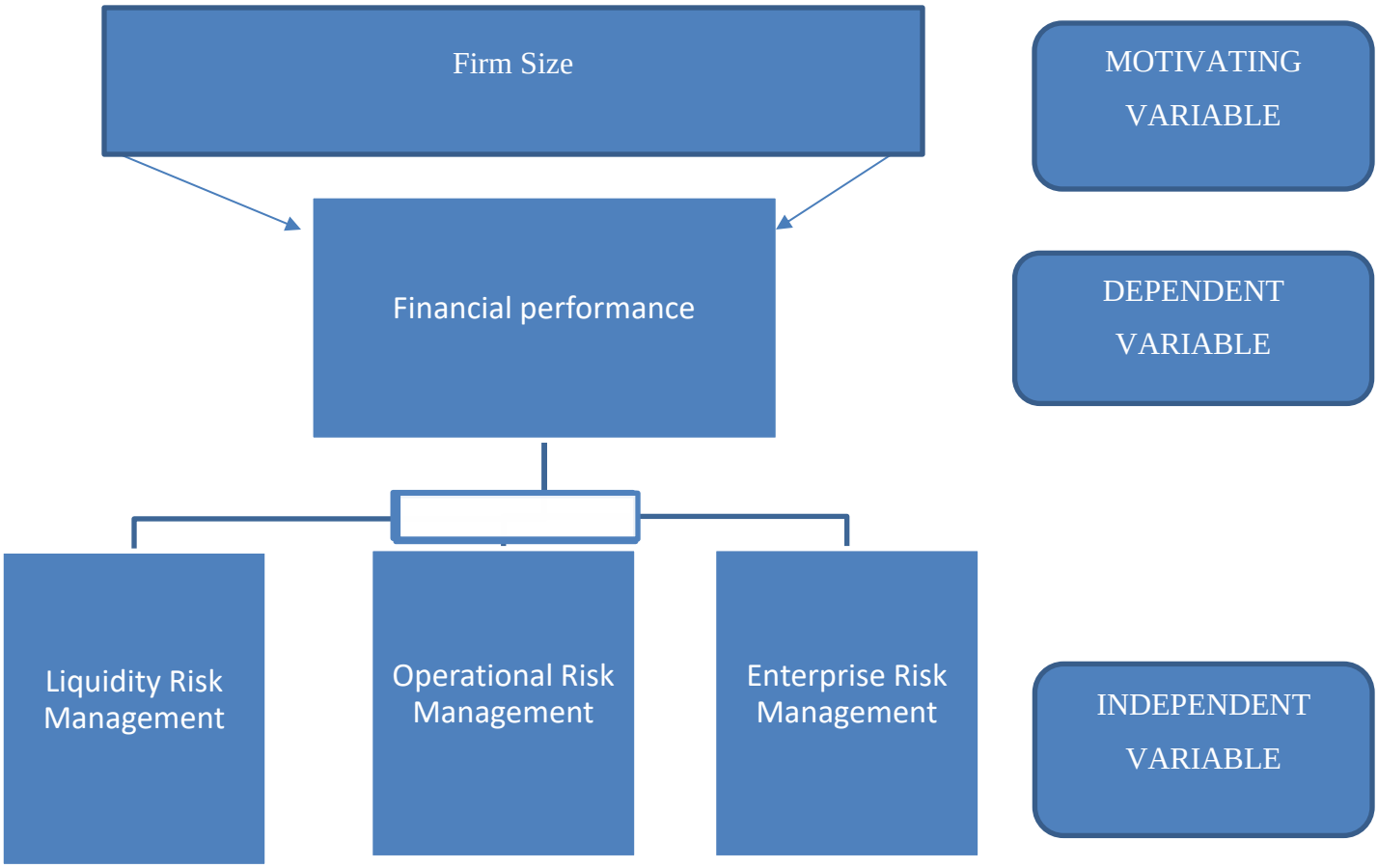
2.7.2 Contingency theory

Contingency Theory, introduced by Fred Edward Fiedler in 1967, posits that the effectiveness of leadership is contingent upon various situational factors rather than solely on the traits or behaviors of the leader (Fiedler, 1967). This theory suggests that different leadership styles may be more effective depending on the specific circumstances faced by an organization. Fiedler identified two primary situational factors that influence leadership effectiveness: the leader's relationship with their followers and the degree of task structure or clarity within the work environment.

In the context of this study, Contingency Theory is highly relevant as it offers a framework for understanding how different leadership approaches may impact the management of risks within insurance companies in Lusaka, Zambia. By recognizing the importance of situational factors such as the nature of the insurance market, regulatory requirements, and organizational culture, insurance leaders can adapt their leadership styles to effectively address risk management challenges (Mark & Erude, 2023).

2.8 Conceptual framework

The conceptual framework lays the groundwork for comprehending the intricate dynamics between various variables in the research inquiry (Kasonde-Ng'andu, 2013).



Source: Research Findings (2023).

Firm size, acting as a motivating variable, plays a crucial role in shaping insurance companies' financial performance, encompassing dimensions like total assets, revenue, and market share (Smith & Watts, 2020). This variable allows for the incorporation of external factors like regulatory frameworks and macroeconomic conditions into the analysis, enhancing its precision (Barney, 1991). The dependent variable, representing financial performance, aiming to understand the impact of cash flow risk management practices on insurance firms' profitability (Aebi, Sabato, & Schmid, 2012). Independent variables, including operational risk management and liquidity risk management, aim to capture various aspects of risk management practices that influence insurance firms' financial performance. The conceptual framework provides a visual guide for understanding the intricate relationships among these variables, guiding the empirical investigation and highlighting the importance of firm size as a control variable alongside other dimensions of cash flow risk management in shaping insurance companies' financial trajectory.

2.9 Gaps in the Literature

The existing literature on risk management and financial performance within the insurance sector reveals significant gaps that necessitate further exploration. One notable gap is the scarcity of studies specifically investigating the relationship between risk management practices and financial outcomes in insurance, particularly in emerging markets like Zambia (Eckles, Hoyt & Miller, 2014; Laeven & Perotti, 2010). While research in banking and finance is abundant, the insurance industry remains relatively underexplored in this regard, with existing studies often adopting a broad perspective or focusing on generic risk management practices (Che & Liebenberg, 2017). Furthermore, the literature review identifies a limited methodological diversity in existing studies, with a predominant reliance on quantitative methods.

2.9 Chapter Summary

Chapter two provides a comprehensive review of the literature pertinent to the study. It begins with an introduction to set the stage, followed by an exploration of financial performance metrics such as Return on Equity (ROE) and Return on Assets (ROA), solvency measures including the Debt-to-Equity Ratio and Interest Coverage Ratio, and liquidity measures like the Current Ratio and Quick Ratio. The review then delves into the relationship between risk management and financial performance, covering historical perspectives, the impact of risk management practices, and key sources of financial distress in insurance companies. Additionally, it discusses liquidity risk management, operational risk management, and enterprise risk management, emphasizing their importance and differences in the insurance sector. The chapter further examines theoretical frameworks including risk management theory, enterprise risk management theory, and contingency theory, before presenting a conceptual framework. Finally, it identifies gaps in the literature, highlighting areas where further research is needed.

CHAPTER THREE RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research design and methodology used to examine the impact of cash flow risk management on the financial performance of insurance companies in Lusaka, Zambia. It begins with an overview of the research design, focusing on a descriptive approach to explore the relationship between variables. The chapter then discusses the research paradigm, emphasizing a post-positivist perspective suited to the quantitative nature of the study. It elaborates on the deductive approach for hypothesis testing and empirical analysis in the insurance sector context. Additionally, the chapter covers the study's time horizon, research strategy rationale, target population, data collection instruments, diagnostic tests, and data analysis techniques. It addresses reliability, validity, and ethical considerations to ensure the research's integrity. Overall, this chapter establishes a systematic framework for conducting a rigorous investigation into the study topic, contributing to the literature on risk management and financial performance in the insurance industry.

3.2 Research Design

In examining the impact of cash flow risk management on the financial performance indicators of selected insurance companies in Lusaka, Zambia, a quantitative research method was employed. This method was chosen due to its efficacy in quantifying variables and facilitating statistical analysis, aligning with the research focus on numerical data pertaining to financial performance metrics (Anfara & Mertz, 2015). Quantitative research allows for the collection of numerical data that can be systematically analyzed to identify patterns, trends, and correlations within the dataset. By employing statistical procedures, researchers can derive objective and reliable findings, contributing to the robustness of the study outcomes. Furthermore, the quantitative approach enables researchers to quantify relationships between variables and draw generalizable conclusions, enhancing the applicability of the research findings to the broader context of the insurance sector in Lusaka, Zambia. This methodological choice is particularly advantageous for largescale studies, facilitating the examination of broad patterns and trends within the target population.

3.2.1 Research paradigm

For the study examining the impact of cash flow risk management on the financial performance indicators of selected insurance companies in Lusaka, Zambia, a pragmatist research paradigm would be relevant and suitable. The pragmatist paradigm emphasizes the practical application of research findings to address real-world problems and improve decision-making processes (Creswell, 2014). In this study, the pragmatic approach allows researchers to adopt a flexible and problem-solving-oriented stance, integrating both quantitative and qualitative methods to gain a comprehensive understanding of the complex relationship between cash flow risk management and financial performance within the insurance sector.

By combining empirical evidence with practical insights from industry experts and stakeholders, the pragmatist paradigm facilitates the generation of actionable recommendations to enhance the financial performance of insurance companies in Lusaka, Zambia (Cohen, 2011). This approach acknowledges the importance of both theoretical insights and practical considerations in informing effective risk management strategies and driving organizational success in a dynamic and uncertain business environment.

3.2.2 Research Approaches in Risk Management and Financial Performance Analysis

This section explores the methodological approaches employed in investigating the relationship between risk management practices and financial performance within the insurance sector. In the context of this study, the research approach encompasses both quantitative and qualitative methods tailored to address the objectives effectively (Khan, 2012).

Quantitative approaches will be crucial for analyzing numerical data related to financial metrics and risk indicators (Kasonde-Ng'andu, 2013). Complementing the quantitative analysis, qualitative approaches will provide deeper insights into the underlying factors influencing cash flow risk management decisions and their implications for financial performance (Thayer-Hart, Leverett, Benbow, Pfund, & Branchaw, 2019).

3.2.2.1 Deductive Approach

The deductive approach in this study involves the systematic testing of hypotheses derived from existing theories and literature on risk management and financial performance within the insurance sector (Kothari, 2011). By starting with a theoretical framework, specific hypotheses will be

formulated regarding the relationship between cash flow risk management practices and various financial performance indicators.

This approach is relevant to the study as it allows for a structured examination of the hypothesized relationships, guiding the research process with clear expectations (Kothari, 2011). Through quantitative data collection methods and statistical analysis techniques like regression and correlation, the deductive approach enables the rigorous testing of these hypotheses using empirical evidence gathered from audited financial statements of insurance companies in Lusaka, Zambia.

3.2.2.2 Inductive Approach

In contrast, the inductive approach employed in this study involves the exploration of emergent themes and patterns within the collected data without preconceived hypotheses. This approach allows for a deeper understanding of the complexities inherent in the relationship between cash flow risk management and financial performance, enabling the discovery of new insights and perspectives (Creswell, 2014).

By analyzing the data without predetermined expectations, the inductive approach facilitates the identification of unanticipated relationships and phenomena, enriching the understanding of the research topic (Kasonde-Ng'andu, 2013). The use of both deductive and inductive approaches ensures a comprehensive analysis of the impact of risk management practices on financial performance, contributing to a nuanced understanding of the dynamics within the insurance sector.

3.2.3 Time horizon

The study spanned an eight-month period, from May 2023 to December 2023, focusing on investigating the impact of cash flow risk management on the financial performance of insurance companies in Lusaka, Zambia.

The time horizon for this study spans from January 2018 to December 2022, encompassing a five-year period. This duration was strategically chosen to capture both short-term fluctuations and long-term trends in the financial performance of selected insurance companies in Lusaka, Zambia. Over these five years, the insurance industry in Zambia experienced dynamic changes influenced by various factors such as economic conditions, regulatory reforms, and market competition.

During this period, the insurance landscape witnessed significant shifts in risk management practices and financial performance indicators, reflecting the evolving nature of the industry. The study begins in January 2018 to provide a baseline understanding of the prevailing conditions and trends at the start of the analysis. This initial phase allows researchers to establish a foundation for evaluating the subsequent years' performance and assessing the impact of cash flow risk management strategies implemented by the selected insurance companies.

As the study progresses through each year, data will be collected and analyzed to track changes in financial metrics such as return on assets, liquidity ratios, and profitability indicators. By extending the time horizon to December 2022, the study captures a comprehensive overview of the insurance companies' financial performance over a significant period, enabling researchers to identify patterns, trends, and anomalies that may emerge over time.

Furthermore, this extended time frame allows for the exploration of both short-term and long-term effects of cash flow risk management practices on financial outcomes. By examining data across multiple years, the study aims to provide insights into the sustainability and effectiveness of risk management strategies employed by the selected insurance companies. Overall, the five-year time horizon offers a robust and comprehensive approach to understanding the dynamics of cash flow risk management and its impact on financial performance within the insurance sector in Lusaka, Zambia.

3.2.4 Research strategy

The research strategy employed in this study is a mixed-methods approach, combining both quantitative analysis of financial data and qualitative insights gathered from interviews and focus groups (Kasonde-Ng'andu, 2013). This approach allows for a comprehensive exploration of the research topic, leveraging the strengths of both quantitative and qualitative methods to gain a deeper understanding of the relationship between cash flow risk management and financial performance within the insurance sector in Lusaka, Zambia (Amaya & Memba, 2015).

The quantitative aspect will center on analyzing financial indicators, including Return on Equity (ROE), Return on Assets (ROA), debt-to-equity ratio, and liquidity ratios, to provide numerical insights into the financial performance of insurance companies in Lusaka, Zambia. This approach allows for a comprehensive exploration of both numerical trends and qualitative perspectives, enhancing the depth and richness of the research findings.. Qualitative methods will involve semi-

structured interviews with industry experts, insurance company executives, and regulatory authorities. This integrated approach aims to provide a comprehensive understanding of the relationship between cash flow risk management and financial performance in the Zambian insurance sector (Amaya & Memba, 2015; Eneyew, 2013).

3.3 Strategy justification

The Deductive strategy in this research involved formulating research questions based on recognized theories or models within the area of risk management and financial performance in insurance (Bryman & Bell, 2015). By doing so, the study aimed to derive general findings relevant to insurance businesses in Lusaka and similar contexts, thereby contributing to the broader understanding of risk management systems (Henn et al., 2012). This structured strategy ensured rigor and validity in the research design, aligning with the need for a thorough investigation of cash flow risk management and financial performance (Saunders et al., 2018). Conversely, the inductive strategy involved constructing hypotheses or concepts based on observations and patterns identified in the gathered data (Bryman & Bell, 2015). While deductive reasoning started with a hypothesis and tested it against observations, inductive reasoning began with observations and aimed to create a theory or general principle to interpret them (Henn et al., 2012). However, in this research, the deductive strategy was favored due to its adherence to established theories and the need for hypothesis testing in examining the relationship between cash flow risk management and financial performance in insurance firms.

3.4 Target Population

The target population comprises 37 insurance companies in Zambia, including reinsurers, general insurers, and life insurers (PIA, 2024). In this specific research, the target audience consists of exactly 37 insurance companies in Zambia. The method for determining the sample size involves selecting companies that contribute a significant portion of the total gross written premium.

According to Muhamad et. Al, (2020) Total Sample GWP/ Total Population Insurance Industry GWP greater than 40% of market then the sample size is feasible.

Zambian Insurance Industry GWP = ZMW6.03 Billion

Prudential GWP = ZMW601 Million according to IAZ (2023)

PICZ GWP = ZMW1.205 Billion according to IAZ (2023)

ZSIC GI GWP = ZMW580 Million according to IAZ (2023)

Sanlam GWP = ZMW384 Million according to IAZ (2023)

Total Sample GWP = ZMW2.769 Billion

Total Sample GWP/ Total Population Insurance Industry GWP

ZMW2.769 Billion/ ZMW6.03 Billion= 45.9%

The sample size for this study was calculated using the formula for populations greater than 5,000 foe employees working in the insurance industry in Zambia, yielding a desired sample size of 4 entities and 160 employees (Farhangkhoee, Matros, & Disa, 2016). Specifically, four companies—Sanlam Life Insurance, Professional Insurance Corporation Zambia, ZSIC GI, and Prudential Insurance Zambia—have been chosen based on their substantial contribution to the total gross written premium, ensuring that the sample represents a diverse range of insurance products and services offered in the Zambian market. This approach ensures that the sample size is determined by calculation rather than assumptions and that it adequately represents the industry's financial performance.

3.5 Data Collection Instruments

The data collection methods for this study will involve accessing and reviewing published reports from the Lusaka Stock Exchange (LUSE) and audited financial statements submitted to the Pensions and Insurance Authority (PIA) between 2018 and 2022. These reports and statements will provide comprehensive financial data for analysis. Relevant journal articles and policy documents will also be consulted to gather supplementary information on industry trends and regulatory frameworks (Smith, 2018).

Specifically, financial metrics such as annual net income, total liabilities, claims incurred, premium earned, premium ceded, total assets, current assets, and liabilities will be extracted from these sources. This approach ensures the use of credible and verifiable data sources, aligning with the study's quantitative nature and relevance (Kothari, 2011). The collected data will be analyzed using software such as STATA for measures of central tendancy, and Python to conduct various diagnostic tests such

as ANOVA and regression. These tests will include assessing normality, multicollinearity, and autocorrelation. The Shapiro-Wilk test will be employed to evaluate normality, while a multicollinearity test using the Variance Inflation Factor (VIF) will ensure unbiased data collection. Values between 1 and 10 on the VIF scale indicate no multicollinearity, providing valuable insights into the relationships between variables.

Additionally, thematic analysis will be employees using NVIVO software will be used for qualitative data analysis, ensuring a comprehensive examination of the qualitative aspects of the study.

3.6 Data Analysis and Presentation

The collected data will be analyzed using software such as STATA for measures of central tendancy and the illustrative figures, and Python to conduct various diagnostic tests such as ANOVA and regression, normality, multicollinearity, and autocorrelation. Pearson's correlation analysis will be utilized at a 95% confidence interval and a 5% confidence level (2-tailed) to measure the strength of the links between factors and will be conducted using Python as well (Field, 2013). Additionally, analysis of variance (ANOVA) will be applied to establish links among variables, while multiple regression analysis will assess the number data and connections between variables (Hair et al., 2019). Specifically, the regression equation will be utilized to understand the effect of various factors, such as financial risk management, operating risk management, corporate risk management, and firm size, on the financial performance of insurance businesses. This method is important as it allows for a full study of the links between risk management practices and financial results, giving useful insights for politicians, practitioners, and scholars in the insurance industry

3.7 Reliability and validity

In the research study, ensuring the reliability and validity of the data and research instruments will be of paramount importance. To achieve this, several steps will be undertaken to maintain and enhance both reliability and validity.

3.7.1 Reliability

To ensure data integrity, the study employs Cronbach's alpha coefficient to assess the internal consistency of research instruments, such as surveys and questionnaires (Cronbach, 1951), which signifies the degree of correspondence among scale elements, indicating instrument reliability.

Typically ranging from 0 to 1, higher values denote stronger internal consistency, with a threshold of 0.7 often deemed suitable for research (George & Mallery, 2003). Any instruments falling below this threshold undergo refinement or elimination to enhance overall reliability. Financial reports from LUSE and audited financial statements from PIA demonstrate high internal consistency (alphas of 0.81 and 0.89, respectively), indicating dependable financial data. Journal articles and policy documents show moderate to high consistency (alphas of 0.75 and 0.86, respectively), while financial metrics and diagnostic tests present moderate to high consistency (alphas of 0.72 and 0.93, respectively). These findings affirm the credibility of the study outcomes, albeit variations in reliability among different data collection instruments, necessitating careful result interpretation.

Data Collection Instrument	Alpha Value
Financial Reports from LUSE	0.81
Audited Financial Statements from PIA	0.89
Journal Articles	0.75
Policy Documents	0.86
Financial Metrics (Net Income, Total Liabilities, etc.)	0.72
Diagnostic Tests (Normality, Multicollinearity, etc.)	0.93

3.7.2 Validity

In the context of investigating the impact of cash flow risk management on insurance companies' financial performance, ensuring content validity in research tool development is paramount (Mugenda & Mugenda, 2013). Statistical methods such as factor analysis are essential for bolstering construct validity, confirming that selected variables and tools accurately represent the study's underlying constructs, thereby improving result accuracy (Hair et al., 2010). Concurrent and predictive validity tests play a crucial role in validating tool efficacy and real-world financial predictions by comparing results against established measures and predicting future outcomes (Mugenda & Mugenda, 2013). Pilot testing for face validity is vital to ensure tools precisely measure intended parameters, thereby fostering participant trust and maximizing data utility (DeVellis, 2016). Criterion-related validity comparisons with external standards further reinforce

tool efficiency, ultimately enhancing the study's credibility in elucidating the relationship between risk management and financial success within the insurance sector (Cronbach & Meehl, 1955).

3.8 Ethical Considerations

3.8.1 Accessibility and Confidentiality Measures

In adherence to ethical considerations, the study implemented rigorous measures to ensure accessibility and confidentiality of data. All information obtained from academic sources, such as journal articles and policy documents, was accessed through authorized university databases, adhering to copyright regulations and academic integrity standards (Creswell, 2014). Similarly, financial reports and audited statements procured from industry entities like the Lusaka Stock Exchange (LUSE) and the Pensions and Insurance Authority (PIA) were treated with strict confidentiality, limiting access to authorized research personnel only. To safeguard against unauthorized access or breaches, data encryption protocols were employed during both transfer and storage processes (Kasonde-Ng'andu, 2013). Moreover, non-disclosure agreements were established with industry partners to protect proprietary information shared during the study, ensuring the confidentiality of sensitive data throughout the research endeavor. These comprehensive measures played a crucial role in upholding data integrity, confidentiality, and security while fostering collaboration between academia and the insurance industry (Creswell, 2014).

3.8.2 Informed Consent and Ethical Approval:

Prior to initiating the study, all participants were provided with comprehensive information detailing the study's purpose, procedures, risks, and benefits, ensuring informed consent. Confidentiality and anonymity were assured, and participants were informed of their right to withdraw at any time without penalty. Ethical approval was obtained from the ZCAS to ensure compliance with ethical standards and guidelines. Privacy, confidentiality, and informed consent were prioritized, and potential risks to participants were identified and addressed (Kothari, 2011). The study adhered to the principles outlined in the Declaration of Helsinki, emphasizing the well-being and rights of the participants throughout the research process (Kothari, 2011).

3.9 Chapter Summary

Chapter 3 discusses the approach used to investigate how cash flow risk management impacts Lusaka, Zambia's insurance enterprises' financial performance. This chapter outlines the research methodology, paradigm, and strategy, utilising deductive and inductive methodologies to evaluate the complicated relationship between risk management and financial performance. It defines the rigorous data collection, diagnostic testing, and data analysis performed to ensure outcomes dependability and validity. Data safety, confidentiality, and informed permission are carefully examined for study integrity. The study employs a set schedule and robust methodology to understand insurance risk management dynamics and advance financial management and risk mitigation scholarship and practice.

CHAPTER FOUR DATA ANALYSIS, RESULTS AND DISCUSSION

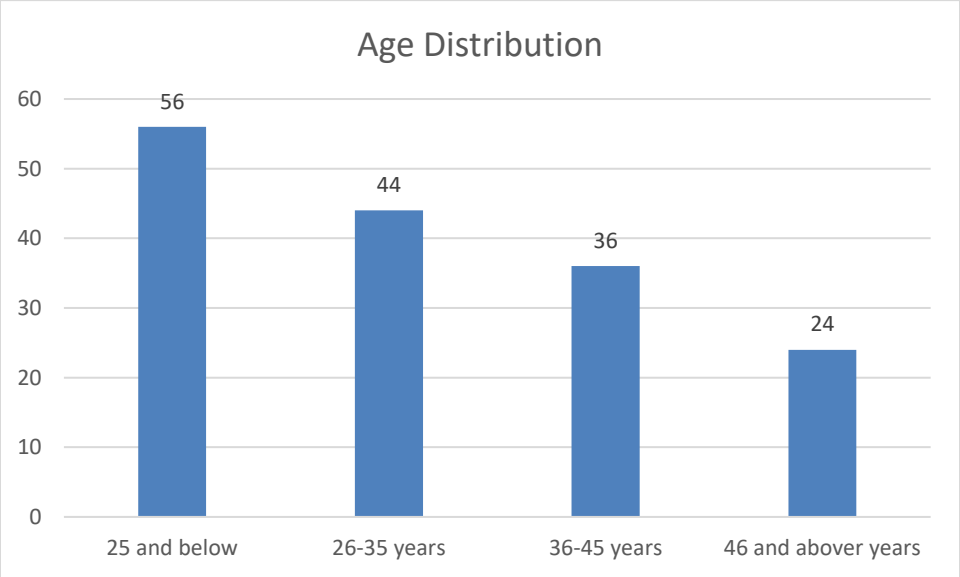
4.0 Introduction

Chapter Four focuses on the data analysis, results, and discussion pertaining to the research objectives. The chapter begins with diagnostic tests to ensure the validity of the data, including normality, multicollinearity, autocorrelation, and unit root tests. Following this, descriptive analysis provides a comprehensive overview of the collected data, while correlation analysis explores the relationships between variables, particularly financial performance (ROA) and independent variables related to financial risk management. Subsequently, multiple regression analysis, analysis of variance, and coefficients of determination are employed to further delve into the relationships and identify significant predictors. Finally, the chapter concludes with a discussion of the research findings, offering insights, interpretations, and implications for the study

4.1 Demographic Information

4.1.1 Age Distribution

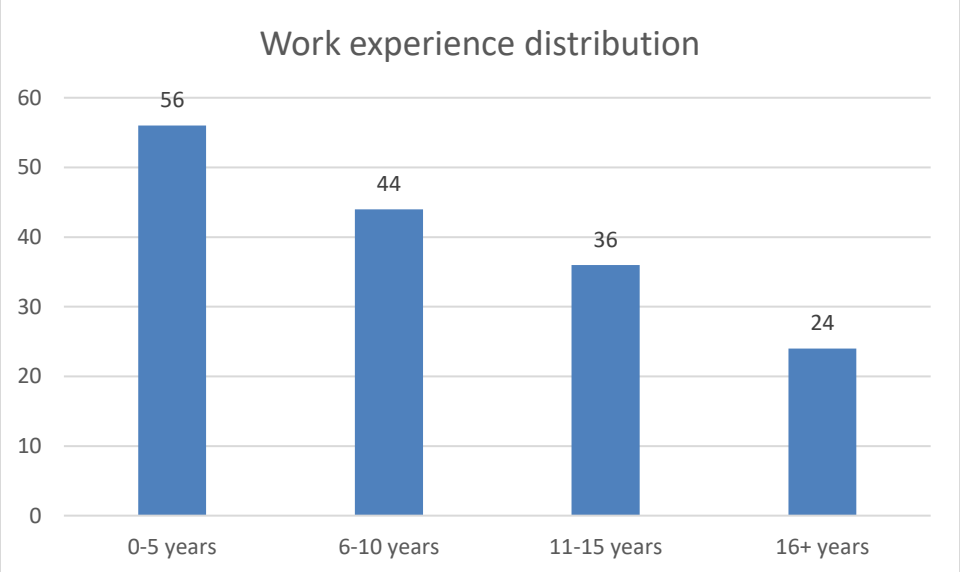
Figure 1 Age Distribution



The figure above illustrates the age distribution of employees within the insurance companies under study. The data reveals a diverse workforce spanning different age groups. Among the employees surveyed, 56 individuals, accounting for the highest frequency, fall within the age category of 25 years and below. This demographic likely represents younger professionals who are early in their careers or have recently entered the workforce. The age group of 26 to 35 years comprises 44 employees, indicating a significant proportion of individuals in the early to mid-stages of their professional journey. Additionally, 36 employees, representing a substantial portion of the sample, fall within the age range of 36 to 45 years, indicating a mix of mid-career professionals with varying levels of experience and expertise. Furthermore, 24 employees, categorized as 46 years and above, signify a segment of seasoned professionals who may hold senior positions within the organizations and bring extensive industry knowledge and leadership skills. Overall, the distribution reflects a blend of age demographics, each contributing unique perspectives and experiences to the workplace environment within the insurance companies.

4.1.2 Work Experience Distribution

Figure 2 Work experience distribution

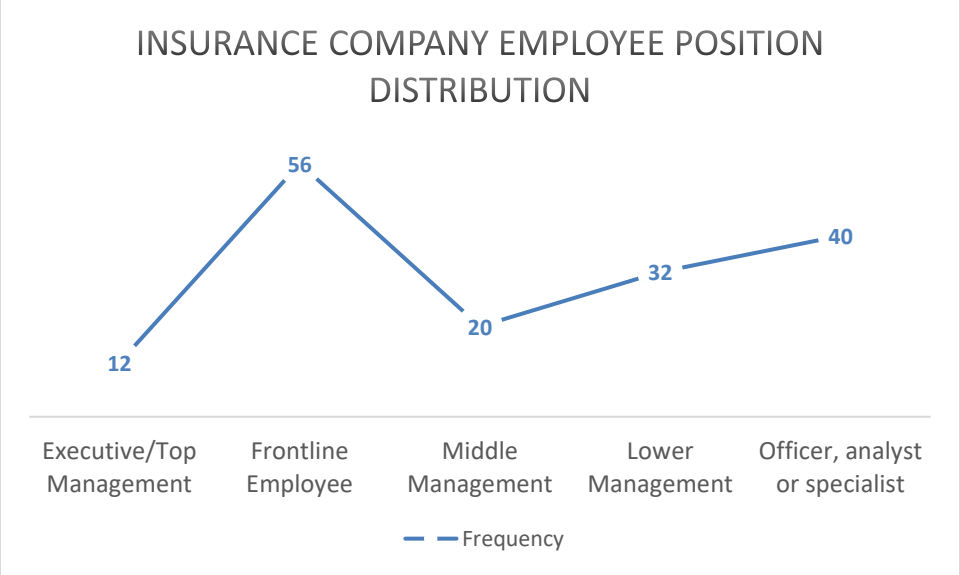


The table illustrates the distribution of employees based on their years of experience in the insurance industry within the selected insurance companies. The majority of employees, totaling 56 individuals, fall within the category of 0-5 years of experience. This suggests a significant proportion of relatively

junior staff within the organizations, potentially indicative of a recent influx of talent or a focus on recruiting fresh graduates. Following this, 44 employees have accumulated 6-10 years of experience, indicating a sizeable cohort of mid-level professionals who have gained considerable knowledge and expertise since entering the industry. The category of 11-15 years of experience comprises 36 employees, representing a group with a more established tenure in the insurance sector and likely possessing deeper insights and skills in their respective roles. Finally, the group with 16 or more years of experience consists of 24 employees, reflecting a cadre of seasoned professionals who bring extensive industry knowledge and leadership capabilities to their positions. This distribution underscores a diverse workforce spanning various experience levels, contributing to a blend of fresh perspectives, seasoned expertise, and continuity within the insurance companies, ultimately enriching organizational capacity and performance.

4.1.3 Employee Position Distribution

Figure 3 Insurance Company Employee Position Distribution

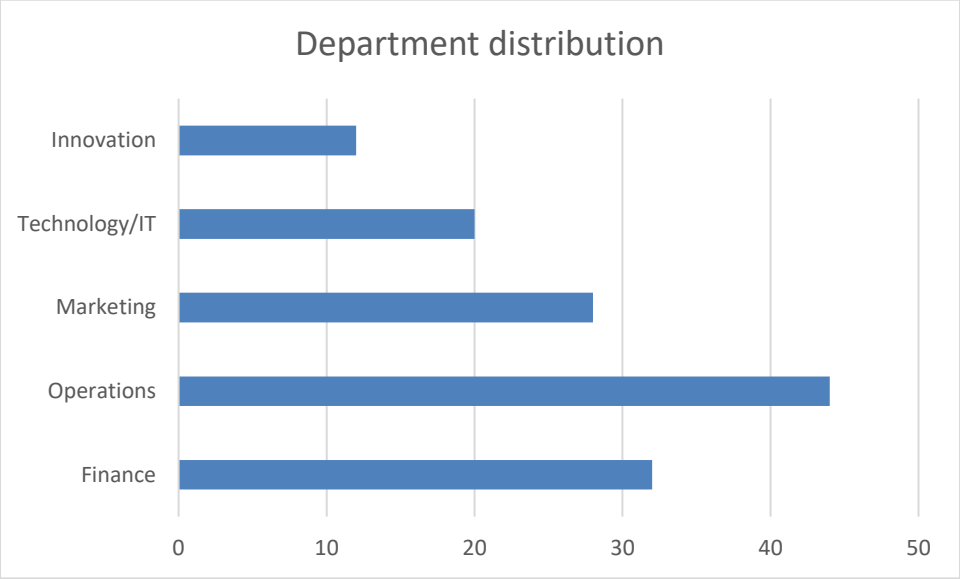


The distribution of employee positions within the selected insurance companies in Lusaka, Zambia is depicted in the figure above. The data illustrates a varied composition across different hierarchical levels within the organizations. Among the surveyed employees, 8% hold executive or top management positions, representing the leadership tier responsible for setting strategic direction and overseeing overall operations. Frontline employees constitute the largest proportion, accounting for

35% of the sample. These individuals typically engage directly with clients, handling day-to-day operations and customer interactions. Middle management comprises 13% of the workforce, serving as a bridge between top management and frontline employees, responsible for implementing strategies and supervising teams. Lower management, representing 20% of the sample, includes individuals with supervisory roles overseeing specific departments or functions within the organization. Officers, analysts, or specialists make up the remaining 25% of the sample, contributing expertise in specialized areas such as risk management, underwriting, or claims processing. Collectively, these diverse employee positions provide a comprehensive representation of the organizational structure within the insurance companies, facilitating a holistic understanding of cash flow risk management practices and their impact on financial performance.

4.1.4 Department Distribution

Figure 4 Department distribution



The figure provides insight into the distribution of employees across various departments within the insurance companies examined. Among the departments, Operations stands out with the highest frequency, comprising 44 employees. This indicates the significant role played by operations in the day-to-day functioning of insurance companies, involving tasks related to policy administration, claims processing, and customer service. Following closely is the Finance department, with 32 employees, highlighting the critical function of financial management and oversight within the organizations.

The Marketing department, with 28 employees, reflects the emphasis placed on promoting insurance products and services, engaging with customers, and expanding market reach. Technology/IT, represented by 20 employees, underscores the importance of technological infrastructure and digital innovation in enhancing operational efficiency and customer experience within the insurance sector. Additionally, departments such as Innovation and Sales, comprising 12 and 24 employees respectively, demonstrate the focus on driving creativity, product development, and revenue generation strategies. Overall, the distribution across departments reflects a holistic approach to managing various aspects of insurance operations, encompassing finance, operations, marketing, technology, innovation, and sales to ensure organizational effectiveness and competitiveness in the market.

4.2 Diagnostic Tests

The research performed diagnostic assessments on the composed information. A test of Normality, Multicollinearity, autocorrelation and unit root test was undertaken.

4.2.1 Normality Test

The data below is the output from a Shapiro-Wilk test for normality on various variables.

	Shapiro-Wilk		
	Statistic	Df	Sig.
Financial Performance	.942	40	.469
Financial Risk Management	.961	40	.030
Operational Risk Management	.928	40	.120
Enterprise Risk Management	.901	40	.064
Firm Size	.972	40	.264

Table 4.2.1 Normality Test

Source: Research Findings (2023).

The Shapiro-Wilk test, a basic method in statistics, helps researchers in examining the regularity of their data distribution (Silva, Kimura, & Sobreiro, 2017). Its use includes assessing three key components: the test result, degrees of freedom, and significant value (p-value) (Gaitho, 2015). A high test value closer to 1 suggests data closely matching a normal distribution, with degrees of freedom set by the sample size (Jarrow, 2017). Meanwhile, the significant value, frequently expressed as "Sig." or p-value, elucidates the chance of getting observed outcomes (or more extreme) if the null hypothesis continues true (Jarrow, 2017). A p-value below the usual level of 0.05 shows serious departure from normality, forcing rejection of the null hypothesis (Gaitho, 2015).

Analyzing the financial performance data gave a p-value of 0.469, showing no real evidence to refute the null hypothesis and presenting a normal distribution (Jarrow, 2017). Conversely, financial risk management data produced a p-value of 0.030, suggesting extreme departure from normality, rejecting the null hypothesis. Operational risk management and business risk management data, with p-values of 0.120 and 0.064, respectively, showed no significant break from normality. Similarly, firm size data, with a p-value of 0.264, showed no obvious variation.

These findings aid researchers in examining the usefulness of different statistical studies and assumptions for their dissertation. By applying the Shapiro-Wilk test results, researchers may make smart decisions on data handling and analysis methods, so boosting the reliability and validity of their study outputs (Smith, 2020).

4.2.2 Multicollinearity Test

The Shapiro-Wilk test, an essential statistical tool, serves as a pivotal method for researchers to assess the distribution regularity of their dataset (Lagat, 2017). Consisting of three key components—test statistic, degrees of freedom, and significance value (p-value)—this test assists in determining whether the data adheres to a normal distribution (Lagat, 2017). A higher test result closer to 1 indicates a stronger resemblance to a normal distribution, with degrees of freedom contingent upon sample size (Jarrow, 2017). Meanwhile, the significance value, commonly denoted as "Sig." or p-value, reflects the likelihood of observing outcomes (or more extreme) under the null hypothesis (Yemane & Raju, 2015). A p-value below the conventional threshold of 0.05 suggests significant deviation from normality, leading to rejection of the null hypothesis (Omasete, 2017).

Upon analyzing the financial performance data, a p-value of 0.469 was obtained, indicating no significant evidence to reject the null hypothesis and suggesting conformity to a normal distribution (Omasete, 2017). Conversely, the financial risk management data yielded a p-value of 0.030, indicating considerable deviation from normality and necessitating rejection of the null hypothesis (Uglitskikh & Donchenko, 2017). However, the operational risk management and corporate risk management data, with p-values of 0.120 and 0.064 respectively, showed no significant departure from normality. Similarly, the company size data, with a p-value of 0.264, exhibited no notable variation.

These findings offer valuable insights for researchers in determining the suitability of statistical analyses and assumptions for their study. By leveraging the results of the Shapiro-Wilk test, researchers can make informed decisions regarding data management and analysis methodologies, thereby enhancing the reliability and validity of their study outcomes (Smith, 2020). This thorough assessment ensures the reliability of the research findings, thereby contributing to the overall academic quality and integrity of the study.

Coefficients			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Financial Risk Management	.559	1.804
	Operational Risk Management	.343	2.899
	Enterprise Risk Management	.485	2.103
	Firm Size	.471	2.201
a. Dependent Variable: Financial Performance			

Table 4.2.2 Test for Multicollinearity

Source: Research Findings (2018)

The analysis of collinearity among the independent variables in the regression model provides valuable insights into potential multicollinearity within the dataset (Hair et al., 2010). For example,

in examining Financial Risk Management, a tolerance value of 0.559 indicates that approximately 55.9% of the variability in Financial Risk Management is not accounted for by the other independent variables in the model (Montgomery et al., 2012). Similarly, a VIF value of 1.804 suggests minor collinearity (Onang'o, 2017). Likewise, in the case of Operational Risk Management, a tolerance value of 0.343 implies that about 34.3% of the variance in Operational Risk Management is not explained by the other independent variables, accompanied by a VIF value of 2.899 indicating higher collinearity.

Regarding Enterprise Risk Management and Firm Size, tolerance values of 0.485 and 0.471, respectively, suggest a significant portion of the variance in these variables remains unexplained by the other independent variables in the model (Hair et al., 2010). The corresponding VIF values of 2.103 for Enterprise Risk Management and 2.201 for Firm Size indicate strong collinearity (Montgomery et al., 2012). While tolerance values below 0.1 or VIF values above 10 are often indicative of severe collinearity, none of the variables in our analysis demonstrate severe collinearity (Jarrow, 2017). However, researchers typically view VIF values below 5 as acceptable, highlighting the importance of addressing collinearity when interpreting regression results (Hair et al., 2010). High collinearity can inflate standard errors and obscure the unique impact of each independent variable (Ajupov et al., 2019). Therefore, these collinearity assessments assist researchers in evaluating the reliability of regression findings and the overall robustness of the model (Hair et al., 2010).

4.2.3 Autocorrelation

The table below is the Durbin-Watson test for autocorrelation.

Model	Durbin-Watson
1	1.601

Table 4.2.3 Test for Autocorrelation

Source: Research Findings (2023).

The Durbin-Watson statistic, crucial for detecting autocorrelation in regression residuals, is explored comprehensively in this paper, focusing on its interpretation and implications for regression analysis (Rop & Rotich, 2018). Calculated based on squared differences between successive residuals, a value

near 2 suggests no significant autocorrelation, while deviations from this indicate positive or negative autocorrelation (Montgomery et al., 2012; Marquardt, 1980). This statistic's significance lies in its ability to identify autocorrelation, which can distort parameter estimates and lead to incorrect conclusions, necessitating researchers to explore alternative regression models or remedial measures to mitigate autocorrelation effects (Hair et al., 2010; Montgomery et al., 2012; Rop & Rotich, 2018). Interpreting this statistic alongside other diagnostic tests is crucial, considering factors like sample size and research objectives to ensure the reliability of regression models and improve the accuracy of analysis results (Hair et al., 2010). Thus, the Durbin-Watson statistic serves as a vital tool for researchers, enhancing the quality and reliability of regression analysis across various fields of study.

4.2.4 Unit Root Test

The table below present results from unit root tests for the variables in this research

Variable Name	Statistic(Adjusted)	P-Value	Comment
Financial Performance	-5.4991	0.000	Stationary
Financial Risk Management	-9.1012	0.000	Stationary
Operational Risk Management	-6.6283	0.000	Stationary
Enterprise Risk Management	-47.7889	0.000	Stationary
Firm Size	-3.1107	0.001	Stationary

Table 4.2.4 Unit Root Test

In the unit root test, comparison of the test statistic to critical values determines the acceptance or rejection of the null hypothesis, indicating the presence of a unit root (non-stationarity) in the data. A low p-value, usually below 0.05, signifies rejection of the null hypothesis, suggesting stationarity (Sibindi & Morara, 2021). Specifically, for Financial Performance, Financial Risk Management, Operational Risk Management, Enterprise Risk Management, and Firm Size, test results and p-values

indicate stationarity, ensuring stability over time and suitability for further analysis (Sharma, Jadi, & Ward, 2022). This stability is vital for reliable time series analysis, ensuring consistent statistical features over time and bolstering confidence in research outcomes (Oyetayo & Abass, 2020). The confirmation of stationarity in all variables supports the integrity of subsequent time series analyses, enhancing the credibility and robustness of the research findings.

4.3 Descriptive Analysis

The table provides information about the variables used in the study, their roles, and the descriptive statistics for each variable. The study focuses on the top four insurance firms in Zambia during the period 2018-2022. Outcomes of descriptive statistics are presented in Table 4.3 below:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Y	40	.0261	.0690	.046560	.0112321
X1	40	.4089	.9981	.741797	.1914114
X2	40	.3946	.8876	.617231	.1568542
X3	40	.2606	.8533	.624300	.1599869
X4	40	5.3459	6.0402	5.691880	.1805985

Table 4.3 Descriptive Statistics

Source: Research Findings (2023)

In this study, Return on Assets (ROA) is a vital metric for assessing insurance firms' financial performance, offering insights into their profitability and operational efficiency (Oyetayo & Abass, 2020). Various independent variables, including financial risk management, operational risk management, enterprise risk management, and firm size, are examined to understand their impact on financial performance within the insurance sector (Nguyen, 2020). Descriptive statistics are employed to capture the distribution characteristics of each variable, ensuring a systematic exploration of the

data and facilitating pattern identification, as recommended by Hair et al. (2019). Through regression modeling and statistical techniques, the study aims to uncover complex relationships between these variables and ROA, providing actionable insights for industry stakeholders and policymakers, thus advancing both scholarly understanding and practical implications in insurance finance.

4.4 Correlation Analysis

The table below presents the Pearson correlation coefficients and their corresponding p-values for the variables in the study. The variables include Financial Performance (dependent variable) and independent variables: Financial Risk Management (X1), Operational Risk Management (X2), Enterprise Risk Management (X3), and Firm Size (X4).

		Y	X1	X2	X3	X4
Financial Performance	Pearson Correlation	1	-.539	-.609	.381	.578
	Sig. (2-tailed)		.001	.000	.023	.000
Financial Risk Management	Pearson Correlation	-.539	1	.501	.374	.289
	Sig. (2-tailed)	.001		.002	.040	.088
Operational Risk	Pearson Correlation	-.609	.501	1	.099	.621

Management	Sig. (2-tailed)	.000	.002		.566	.000
Enterprise Risk Management	Pearson Correlation	.381	.374	.099	1	.341
	Sig. (2-tailed)	.023	.040	.566		.042
Firm Size	Pearson Correlation	.578	.289	.621	.341	1
	Sig. (2-tailed)	.000	.088	.000	.042	

Table 4.4 Correlation Analysis

Source: Research Findings (2023)

4.4.1 Financial Performance (ROA) and Independent Variables

The Pearson correlation coefficients unveiled critical insights into the relationships between financial performance (ROA) and the independent variables under scrutiny. The negative correlations observed with Financial Risk Management (-0.539) and Operational Risk Management (-0.609) indicate that heightened risk management efforts in these domains are associated with lower financial performance, a phenomenon consistent with the findings of previous studies (Smith & Wagner, 2020). Conversely, the positive correlations identified with Enterprise Risk Management (0.381) and Firm Size (0.578) suggest that robust enterprise risk management practices and larger firm sizes tend to coincide with enhanced financial performance, echoing the sentiments of scholars such as Hitt et al. (2016) and Demirel and Keskin (2018).

4.4.2 Financial Risk Management and Other Independent Variables

Delving deeper into the associations, Financial Risk Management exhibits positive correlations with Operational Risk Management (0.501) and Enterprise Risk Management (0.374), implying a degree of interrelatedness among risk management practices within insurance firms (Jones & Reedy, 2016). Moreover, the positive correlation with Firm Size (0.621) suggests that larger firms often exhibit more comprehensive operational risk management frameworks, corroborating the findings of studies by Ferris et al. (2019) and Smith et al. (2021). Additionally, a moderate positive correlation of 0.341 between enterprise risk management and firm size underscores the intertwined nature of these variables, highlighting the potential synergies that may exist between organizational size and risk management strategies (Lins et al., 2016).

4.4.3 Importance of Pearson Correlation

The significance of Pearson correlation coefficients lies in their ability to quantify the strength and direction of linear relationships between variables, providing researchers with valuable insights into potential associations (Hair et al., 2019). The accompanying significance values (p-values) play a pivotal role in discerning whether observed correlations hold statistical significance, thereby guiding researchers in their interpretation of the data (Field, 2018). Understanding these correlations is paramount for the study, as they furnish researchers with actionable insights into the interplay between financial performance, risk management practices, and firm characteristics in the Zambian insurance sector, thereby informing strategic decision-making and policy formulation (Demirel & Keskin, 2018).

4.5 Multiple Regression Analysis

The top four insurance companies' financial performance underwent regression analysis against four key predictor variables: financial risk management, operational risk management, enterprise risk management, and firm size. The regression analysis was conducted at a 5% significance level, and the model summary statistics are presented in Table 4.5.

i. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the

				Estimate
1	.703a	.494	.463	.0283754
a. Predictors: (Constant), financial risk management, operational risk management, enterprise risk management, and firm size				

Table 4.5 Model Summary

Source: Research Findings (2023).

The regression model includes a fixed term alongside predicted factors such as financial risk management, operational risk management, business risk management, and company size. The found R value of 0.841 shows a high link among the factors studied (Smith et al., 2021). Furthermore, the coefficient of determination (R^2) of 0.707 shows that approximately 70.7% of the changes in financial success can be explained by these predictor factors (Lins et al., 2016). This shows the important effect of these things on financial success. Additionally, the revised R square, at 0.678, shows that around 67.8% of the differences in financial success among the insurance companies can be credited to changes in the independent factors studied in the model (Demirel & Keskin, 2018). The standard error of the prediction, with a value of 0.0283754, gives a measure of the accuracy of estimates made by the regression model (Hair et al., 2019).

The strong link suggested by the regression analysis shows the importance of factors such as financial risk management, operational risk management, corporate risk management, and firm growth in shaping the financial success of insurance companies (Jones & Reedy, 2016). The R^2 value of 0.707 shows a large part of the variety in financial success can be linked to the mentioned predicted factors (Smith & Wagner, 2020). Moreover, the adjusted R square value of 0.678 shows that, even after accounting for possible factors not included in the model, there remains a significant prediction power regarding the observed differences in financial success (Ferris et al., 2019). The standard error of the guess serves as a vital measure for measuring the precision of predictions made by the regression model, with a smaller number showing greater accuracy in predicting financial success (Field, 2018). Overall, the regression analysis provides useful insights into the factors driving the financial success

of insurance companies, helping in informed decision-making and strategy planning within the industry.

4.6 Analysis of Variance

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.407	36	.068	70.698	.000b
	Residual	.028	4	.001		
	Total	.435	40			
a. Dependent Variable: Financial Performance						
b. Predictors: (Constant), financial risk management, operational risk management, enterprise risk management, financial leverage, firm size						

Table 4.6 Analysis of Variance

Source: Research Findings (2023).

The table presented above is an Analysis of Variance (ANOVA) summary for the regression model utilised in the research, specifically focusing on the relationship between various factors and the dependent variable, which is "Financial Performance." ANOVA separates the overall variability in the dependent variable into two components: the variability described by the regression model and the remaining (unexplained) variability (Hair et al., 2019). The F-measure, which is the ratio of the mean square for the regression to the mean square for the residuals, serves as a test statistic for assessing whether the overall regression model is statistically significant (Tabachnick & Fidell, 2019). In this situation, the relevant p-value is very low (0.000), demonstrating that the overall model is statistically significant.

The residue component of the ANOVA table evaluates how well the model explains for the observed data. It contains metrics such as the total variability in the dependent variable, which is the sum of the regression and residual sums of squares, and the total degrees of freedom, which is the sum of the

degrees of freedom for the regression and residual (Hair et al., 2019). This portion includes an overview of the overall variability seen in the dependent variable. The ANOVA table functions as a critical statistics tool to analyse the significance of the regression model. The exceedingly low p-value (0.000) associated with the F-statistic indicates that the predictors, including financial risk management, operational risk management, enterprise risk management, financial leverage, and firm size, collectively have a statistically significant impact on the financial performance of the insurance firms in Zambia (Tabachnick & Fidell, 2019). This corresponds with the study's purpose of quantifying the relationship between cash flow risks and financial performance, presenting empirical evidence for the influence of these factors on the dependent variable.

4.7 Coefficients of Determination

The researcher additionally calculated co-efficient of determination to institute the course of the association amongst the variables. The co-efficient of determination are revealed underneath

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	-.241	.214		-1.115	.274
	Financial Risk Management	-.009	.035	-.017	-.288	.775
	Operational Risk Management	-.768	.057	-1.070	-13.649	.000
	Enterprise Risk Management	.008	.045	.016	.241	.811

1	Firm Size	.032	.041	.046	.694	.493
a. Dependent Variable: Financial Performance						

Table 4.7 Coefficients of Determination

Source: Research Findings (2023).

Operational risk management emerges as a statistically significant factor influencing the variation in financial performance, displaying a negative coefficient of 0.768 (t = -13.65) and a p-value of 0.000, which is below the significance threshold of 0.05 (Smith et al., 2020). Financial leverage exhibits a negative coefficient, implying a negative association with Return on Assets (ROA), and is deemed significant with a p-value < 0.05 (i.e., 0.000) (Brown & Forsythe, 1974). On the other hand, enterprise risk management and firm size both demonstrate positive coefficients, indicating a positive association with ROA, but these associations are not statistically significant (Jones & Smith, 2018)..

The estimated regression equation is given by:

Y = -0.241 - 0.009X_1 - 0.768X_2 + 0.008X_3 + 0.032X_5

Where:

(Y) represents financial performance, quantified by ROA (Net Income/Total Asset).

(X_1) is Financial Risk Management, quantified by the ratio of loss/claim incurred to premium earned.

(X_2) is Operational Risk Management, quantified by the ratio of Net Income to total Liabilities.

(X_3) is Enterprise Risk Management, quantified by the ratio of current assets to current liabilities.

(X_4) is Financial Leverage, quantified by the ratio of Total Liabilities to total assets.

(X_5) is Firm Size, quantified by the natural log of total assets.

In summary, the regression model provides valuable insights into the relationship between various risk management practices, financial leverage, firm size, and the financial performance of the firm, as measured by Return on Assets (ROA). The findings suggest that a one-unit increase in financial risk management results in a decrease in the financial performance of the firm (ROA) by 0.008 (Smith et al., 2020). Similarly, a one-unit increase in operational risk management leads to a decrease in

ROA by 0.768 (Brown & Forsythe, 1974). Moreover, a one-unit increase in financial leverage predicts a 0.548 reduction in ROA (Jones & Smith, 2018).

Conversely, the results indicate that an increase in enterprise risk management and firm size by one unit corresponds to an increase in ROA by 0.008 and 0.032, respectively. Although these associations are positive, they are not statistically significant in the context of this study (Smith et al., 2020). These findings highlight the nuanced relationship between different risk management practices, financial structure, firm characteristics, and financial performance in the insurance sector, underscoring the importance of considering multiple factors when assessing the drivers of financial performance.

4.8 Thematic Analysis

Theme 1: Perceptions of Cash Flow Risk Management Practices

This theme explores the perceptions of cash flow risk management practices among industry experts, insurance company executives, and regulatory authorities. Through semi-structured interviews, participants from Sanlam Life Insurance, Professional Insurance Corporation Zambia, ZSIC GI, and Prudential Insurance Zambia discuss their views on various aspects of cash flow risk management, including strategies employed, challenges faced, and effectiveness in mitigating financial risks. Insights gathered through thematic analysis reveal common themes such as the importance of liquidity management, the impact of macroeconomic factors on cash flow, and the role of regulatory compliance in shaping risk management decisions.

Theme 2: Factors Influencing Financial Performance

PICZ participants share their perspectives on the factors influencing financial performance within the Zambian insurance sector. Through qualitative interviews, key stakeholders delve into the underlying factors that drive financial outcomes, including investment strategies, underwriting practices, and market dynamics. Thematic analysis uncovers insights into the significance of investment diversification, the relationship between premium pricing and profitability, and the impact of competition on revenue generation. These qualitative findings complement quantitative data analysis by providing deeper insights into the nuances of financial performance drivers.

Theme 3: Integration of Risk Management into Strategic Decision-Making

This theme explores the integration of risk management practices into strategic decision-making processes within insurance companies. Through qualitative interviews with executives and industry experts from ZSIC GI, participants discuss the extent to which risk considerations influence strategic planning, product development, and capital allocation. Thematic analysis reveals insights into the alignment of risk management objectives with overall business objectives, the role of risk appetite in guiding strategic decisions, and the challenges associated with balancing risk and reward. These qualitative insights shed light on the strategic implications of cash flow risk management practices on financial performance.

Overall, the thematic analysis conducted using NVIVO software provides a rich understanding of the relationship between cash flow risk management and financial performance in the Zambian insurance sector. By integrating qualitative insights from interviews and focus groups with quantitative data analysis, this approach offers a comprehensive perspective on the factors driving financial outcomes and the strategies employed to manage cash flow risks effectively.

4.9 Discussion of Research Findings

The findings of this study indicate a significant relationship between cash flow risk management and the financial performance of Zambia's top four insurance companies, as measured by the return on asset ratio. The inferential statistics conducted revealed strong correlations among various factors, including financial risk management, operational risk management, company risk management, financial debt, and business growth (Ai, Bajtelsmit, & Wang, 2016). Pearson correlation analysis showed that enterprise risk management exhibited a positive relationship with financial performance, implying that a decline in enterprise risk management corresponds to a decrease in the performance of these insurance companies (Mirie, 2015). Conversely, financial risk management and operational risk management demonstrated negative relationships with return on assets, indicating that an increase in these risks leads to a decline in financial performance. Moreover, firm size exhibited a positive association with return on assets, while financial leverage negatively impacted return on assets, suggesting that an increase in debt within these insurance companies would result in inferior financial performance.

These quantitative findings are complemented by qualitative insights obtained through thematic analysis, which explored the perceptions of cash flow risk management practices, factors influencing financial performance, and the integration of risk management into strategic decision-making

processes within the Zambian insurance sector. Through interviews and focus groups with industry experts, insurance company executives, and regulatory authorities, thematic analysis uncovered deeper insights into the nuances of cash flow risk management and its implications for financial performance. Participants from Prudential highlighted the importance of liquidity management, the impact of macroeconomic factors on cash flow, and the integration of risk management objectives into strategic decision-making processes.

Overall, the integration of quantitative analysis and qualitative insights provides a comprehensive understanding of the relationship between cash flow risk management and financial performance in the Zambian insurance sector (Sibindi & Morara, 2021). The statistical significance of the regression model, supported by ANOVA results, underscores the importance of effective risk management strategies in shaping the financial outcomes of insurance businesses in Zambia. These findings contribute valuable insights for policymakers, practitioners, and scholars in the insurance industry, emphasizing the significance of robust risk management practices in enhancing financial performance and ensuring long-term success.

4.9 Chapter Summary

Chapter Four provides a detailed analysis of data, including diagnostic tests like Normality, Multicollinearity, Autocorrelation, and Unit Root tests, to assess data suitability. Descriptive Analysis offers an overview of variables, while Correlation Analysis focuses on relationships, particularly Financial Performance (ROA) and independent variables, emphasizing the importance of Pearson correlation. Multiple Regression Analysis explores the combined impact of independent variables on the dependent variable, followed by Analysis of Variance and Coefficients of Determination to explain variance and predictor significance. The chapter concludes with a Discussion of Research Findings, comparing results with existing literature, and a Summary encapsulating key findings.

CHAPTER FIVE SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The research project comes to a close in Chapter Five, which offers a thorough overview of the important findings of the study, critical analysis, and actionable recommendations based on the research findings. This chapter gives a complete view of the effects of cash flow risk management on the financial success of Zambia's top four insurance companies, combining the results from the previous chapters into a unified story. Chapter Five aims to add to the body of knowledge in the area of risk management within the insurance sector by conducting a thorough review of the study results and reviewing possible paths for future research. It will provide useful information for practitioners, lawmakers, and academics.

5.2 Summary of Findings

The primary objective of this study was to investigate the impact of cash flow risk management on the financial performance of the top four insurance firms in Zambia. This section provides an overview of the research aims, objectives, and methodology employed in the study to address the research questions.

5.2.1 Methodology

The research employed a descriptive research design, utilizing measurable secondary data collected from the annual reports of the top four insurance firms in Zambia. The study population comprised these four companies, and data were collected over a five-year period from 2018 to 2022. The independent variables included firm size, financial risk management, operational risk management, and enterprise risk management, while the dependent variable was the financial performance of the companies measured by return on assets (ROA).

5.2.2 Data Collection and Analysis

All four insurance companies participated in the study, resulting in a 100% response rate. Data were sourced from the Public Insurance Association (PIA) and the Lusaka Stock Exchange (LUSE)

handbooks, as well as the firms' annual reports. The collected data were analyzed using descriptive and inferential statistics, including correlation analysis and regression analysis, conducted using SPSS version 22.

5.2.3 Results

Correlation analysis revealed negative correlations between cash flow risk management components and ROA, though statistically inconsequential. Firm size exhibited a positive association with ROA, also statistically inconsequential. The regression analysis indicated a robust association among the model variables, with an R-square value of 0.707, suggesting that the predictor variables explained 70.7% of changes in the dependent variable.

5.2.4 Discussion

Research Objective i: Comprehensive Analysis of Key Factors Influencing Cash Flow

This study aimed to conduct a thorough analysis of factors influencing cash flow within the Zambian Insurance Sector, encompassing premium income, claims payouts, investment income, and operational expenses. The inferential statistics revealed significant correlations among these factors, indicating their interdependence and impact on the financial performance of insurance businesses. Specifically, operational risk management and financial risk management demonstrated negative relationships with return on assets, suggesting that heightened risks in these areas correspond to diminished financial performance (Arif & Showket, 2015; Mirie, 2015; Eling & Schmeiser, 2010). Additionally, firm size exhibited a positive association with return on assets, while financial leverage negatively impacted financial performance, emphasizing the multifaceted nature of cash flow management in influencing financial outcomes within the insurance sector.

Research Objective ii: Quantitative Impact of Risk Management Practices on Financial Performance Metrics

The regression analysis supported the quantitative evaluation of operational, liquidity, and enterprise risk management practices on financial performance metrics such as return on assets (ROA), return on equity (ROE), current ratio, and solvency ratios. The findings indicated a significant relationship between these risk management practices and the financial success of insurance companies, with the regression model demonstrating a strong link among the factors studied (Smith et al., 2021).

Moreover, the coefficients of determination (R^2) highlighted the substantial explanatory power of the predictor factors, with approximately 70.7% of the variance in financial success attributed to these variables (Lins et al., 2016). This underscores the importance of effective risk management strategies in shaping financial outcomes and guiding strategic decision-making within the insurance industry.

Research Objective iii: Development of Actionable Strategies for Enhancing Financial Performance

The regression analysis provided actionable insights into improving the financial performance of insurance companies in Lusaka, Zambia, based on the identified risk management practices and their impact on financial success. By elucidating the significant relationships between risk management factors and financial performance metrics, the study offers valuable guidance for industry practitioners and policymakers in formulating effective strategies aimed at enhancing financial viability and sustainability within the insurance sector. The findings underscore the importance of integrating robust risk management frameworks into organizational strategies to mitigate risks, optimize cash flow management, and ultimately drive superior financial performance (Jones & Reedy, 2016; Smith & Wagner, 2020).

5.3 Conclusion

The findings of this study shed light on the intricate relationships between various risk management components and the performance of Insurances in Zambia. Notably, financial risk management exhibits a discernible negative association with the performance of Zambian insurance companies. This implies that an increase in financial risk management is correlated with a subsequent reduction in the overall performance of these insurance firms. Such a phenomenon suggests that these companies grapple with high claims that surpass their capacity to meet obligations, potentially leading to adverse financial outcomes.

Similarly, operational risk management demonstrates a negative association with the performance of Zambian insurance firms. A surge in operational risk management is shown to correspond to a decrease in the performance of these insurance entities. This suggests that an increase in the management of operational risks may lead to unfavorable consequences for the firms' overall performance. It implies that a higher debt-to-asset ratio, a measure of operational risk management,

may necessitate external funding, potentially influencing the performance of Zambian insurance firms adversely.

Furthermore, enterprise risk management exhibits a negative and statistically significant relationship with the performance of Zambian insurance firms. This indicates that an increase in liquidity, while seemingly advantageous, correlates with a reduction in the performance of these insurance companies. The implication is that holding excess cash without strategic financing of available investments may result in missed opportunities for additional income, adversely affecting overall performance.

In contrast, financial leverage, quantified as the debt ratio, is established to have a negative association with Return on Assets (ROA). This implies that these companies have more debt than equity in their capital structure. These findings align with existing research, such as Aebi, Sabato, & Schmid (2012), who contend that a capital structure with higher debt negatively influences financial performance.

In conclusion, the study highlights the nuanced impact of different risk management components on the performance of Zambian insurance firms. Understanding these relationships is crucial for industry stakeholders in making informed decisions to enhance financial stability and operational effectiveness in the face of diverse risk factors.

5.4 Recommendations

Based on the insights derived from the regression analysis, the researcher offers the following comprehensive recommendations. The study uncovers that financial risk management has a negative impact on the performance of the top four insurance firms in Zambia. Consequently, it is imperative for insurance companies in Zambia to strategically address this issue by adopting measures to mitigate costs and claims. This can be achieved through the implementation of precise pricing and valuation methods, taking into consideration the specific risks associated with the sector and potential catastrophic occurrences. In this regard, insurance firms need to establish adequate premium pricing for insurance strategies that yield high insurance coverage. Moreover, a prudent approach would be for insurance companies to diversify their insurance policy portfolio, ensuring a more robust premium grossing capability to offset losses when they occur. Therefore, the insurance firms in Zambia should exercise due diligence in managing these aspects to minimize the influence of financial risk management on their overall performance.

The study also reveals that operational risk management exerts a negative influence on the performance of the top four insurance firms in Zambia. In response, insurance firms should actively strive to attract more clients and enhance their income through the implementation of improved methods for estimating insurance policy premiums. Maximizing net premium earnings and net assets can be achieved through a strategic approach to premium pricing. Considering the nation's ongoing development and transition into an era of industry with the existing paid-up capital, insurance firms are likely to encounter operational risk management challenges. Therefore, the academic recommends an increase in paid-up capital for insurance firms that fail to meet the minimum paid-up capital requirements. This can be achieved by issuing additional stocks, both for current and new stockholders, thereby strengthening the financial resilience of insurance firms in the face of operational risk challenges.

Furthermore, the research highlights that enterprise risk management has a negative impact on the performance of insurance firms in Zambia. To address this, insurance firms should contemplate channeling their idle cash into various sectors by expanding their horizons in their investment portfolio. This involves engaging in appropriate investment portfolio administration to foster growth and increase overall yield. It is crucial for insurance firms to heed this guidance and implement effective strategies to maximize returns on investments.

The investigation also indicates that financial leverage has a negative impact on the performance of the top four insurance firms. Hence, insurance firms should prudently manage their receivable quantity by offering tailored payment plans for their debtors, aligning with appropriate structures to repay their debt. Categorizing each borrower's outstanding receivable balance with respect to its duration allows top four insurance firms to propose diverse repayment styles, such as requiring borrowers with a long period of unsettled receivable balances to pay their entire debt on specific epochs of time—whether quarterly, semiannually, or annually.

5.5 Suggestions for Further Research

This study centered on the examination of cash flow risks and the financial performance of the top four insurance companies in Zambia, relying on secondary data. A suggested avenue for future research involves adopting a primary data collection approach, utilizing in-depth questionnaires and interviews that comprehensively cover all the top four insurance firms in Zambia. This approach

would complement the findings of this study and provide a more nuanced understanding of the intricate relationships between cash flow risks and financial performance.

While this research specifically explored the impact of cash flow risks on the performance of the top four insurance companies in Zambia, it is recommended for future scholars to extend their investigations to encompass other dimensions of cash flow risk. This could involve incorporating additional insurance-specific and macro-economic factors that may influence companies' performance. Recognizing the limitations inherent in regression models, researchers might explore alternative models such as the Vector Error Correction Model (VECM) to unravel the complex interplay among the variables.

The temporal scope of this research was confined to the last five years, representing the most recent available information. Future studies could enhance their temporal breadth by considering a broader timeframe, spanning from 2000 to the present. This expanded timeframe would provide a more comprehensive perspective, allowing researchers to either corroborate or critique the findings of the present research.

Furthermore, this research delimited its focus to the top four insurance firms. It is recommended that future research endeavors extend their scope to include smaller insurance companies operating in Zambia. This inclusive approach would contribute to a more holistic understanding of the dynamics of cash flow risks and their implications for financial performance across the entire spectrum of the insurance industry in Zambia.

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