



Z C A S U N I V E R S I T Y

MASTER'S DISSERTATION

An Assessment on the Relationship Between Selected Underwriting Risk Management Practices and Insurer Profitability: A Case of Professional Insurance Corporation Zambia

(State the complete research title exactly as approved by your supervisor)

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A dissertation submitted to ZCAS University in partial fulfilment of the requirements
for the award of Master's Degree in Financial Risk Management

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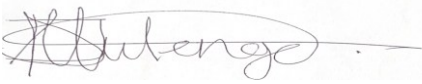
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DECLARATION

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CERTIFICATE OF APPROVAL

This dissertation by Joseph Dennis Mulenga, Student Number 202403160, entitled "An Assessment on the Relationship Between Selected Underwriting Risk Management Practices and Insurer Profitability: A Case of Professional Insurance Corporation Zambia" has been read and approved as meeting the requirements of ZCAS University for the award of Master's Degree in Financial Risk Management.

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DEDICATION

I dedicate this research to God Almighty for His guidance, strength, and grace throughout my studies. I also dedicate it to my family, whose unwavering support and encouragement have been instrumental in making this achievement possible

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I would like to express my sincere gratitude to God Almighty for His guidance and strength throughout my studies and the successful completion of this research. I extend my heartfelt appreciation to my supervisor, Geoffrey K. Mweshi, for his invaluable guidance, support, and insightful feedback throughout this study. I am also deeply grateful to my parents, my sister Luse Mulenga, family, and friends for their unwavering encouragement, support, and motivation throughout my academic journey. Lastly, I sincerely thank ZCAS University for providing the academic environment and resources that made this research possible.

ABSTRACT

This study assessed the relationship between selected underwriting risk management practices and insurer profitability using a case study of Professional Insurance Corporation Zambia (PICZ) Head Office in Lusaka, Zambia. Specifically, the study examined the relationship between risk assessment processes, underwriting risk selection practices, pricing and premium-setting methods, reinsurance arrangements, and insurer profitability. The study adopted a positivist research philosophy and employed a quantitative case study research design. A census approach was used to collect data from 23 employees in the Underwriting Department at Professional Insurance Corporation Zambia. Primary data were collected using a structured questionnaire and analysed using SPSS version 21.0. The data were analysed using descriptive statistics, reliability analysis, and Spearman's rank correlation analysis to determine the relationships between the study variables. The findings revealed that respondents generally perceived the organisation's underwriting risk management practices to be effective. The study further found positive relationships between all the selected underwriting risk management practices and insurer profitability. However, only the relationship between pricing and premium-setting methods and insurer profitability was statistically significant at the 5% level, while the relationships involving risk assessment processes, underwriting risk selection practices, and reinsurance arrangements were positive but not statistically significant. The study concluded that sound underwriting risk management practices are positively associated with insurer profitability and remain important components of effective underwriting decision-making. The study recommends that Professional Insurance Corporation Zambia continue strengthening its risk assessment processes, underwriting risk selection practices, pricing and premium-setting methods, and reinsurance arrangements to enhance underwriting performance and support long-term financial sustainability. Future studies should consider including multiple insurance companies and a larger sample to improve the generalisability of the findings.

Keywords: Underwriting risk management, risk assessment processes, underwriting risk selection practices, pricing and premium-setting methods, reinsurance arrangements, insurer profitability, Professional Insurance Corporation Zambia

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LIST OF ABBREVIATIONS AND ACRONYMS

Abbreviation	Meaning
AML	Anti-Money Laundering
FRM	Financial Risk Management
GDP	Gross Domestic Product
GWP	Gross Written Premium
IAZ	Insurance Association Zambia
IFRS	International Financial Reporting Standards
NWP	Net Written Premium
PIA	Pensions and Insurance Authority
PICZ	Professional Insurance Corporation Zambia
ROA	Return on Assets
ROI	Return on Investment
SME	Small and Medium Enterprise
UW	Underwriting

CHAPTER ONE: INTRODUCTION AND BACKGROUND

1. Introduction

Recent empirical studies demonstrate that insurer profitability is predominantly driven by the robustness of underwriting risk-management practices, particularly the accuracy of risk assessment, pricing discipline, loss and expense control, and the effectiveness of risk selection. Evidence from regional and emerging markets indicates that weaknesses in underwriting, such as inadequate premium rating, insufficient evaluation of client risk profiles, and ineffective control measures, directly increase claims costs and erode underwriting margins. Studies within Southern Africa further reveal that persistently high claims ratios, rising operational expenses, inadequate reinsurance structures, and weak compliance with underwriting guidelines exert a statistically significant negative effect on insurer profitability (Veronica et al., 2024).

Contemporary insurance literature emphasizes that profitability is increasingly determined by underwriting quality rather than premium volume, as sound risk selection and accurate pricing are essential for managing loss experience and sustaining financial performance (Cummins, 2017; Vaughan & Vaughan, 2019). This relationship is particularly pronounced in emerging markets such as Zambia, where inflationary pressures, exchange-rate volatility, and evolving regulatory frameworks heighten underwriting uncertainty and amplify the financial impact of poor pricing and risk assessment decisions (Outreville, 2018). In this context, effective underwriting practices are critical to maintaining insurer solvency and long-term sustainability.

Accordingly, this study examines the impact of underwriting practices on the profitability of Professional Insurance Company in Zambia, with specific focus on risk assessment procedures, pricing methodologies, reinsurance arrangements, and claims control mechanisms. This chapter establishes the foundation for the study by presenting the background, outlining the research objectives and questions, and defining the scope and rationale guiding the investigation.

1.2 Background of the study

Underwriting risk management has historically served as a core mechanism through which insurance companies achieve financial stability and sustainable profitability. In earlier periods, underwriting practices were largely grounded in actuarial judgement,

historical loss experience, and standardised rating structures, which enabled insurers to align premium income with expected claims and expenses under relatively stable operating conditions (Cummins & Venard, 2008). Under such framework's, underwriting performance was primarily assessed using traditional indicators such as loss ratios and combined ratios, with profitability reflecting the degree of discipline exercised in risk selection and pricing.

As insurance markets evolved, underwriting environments became increasingly complex due to heightened claims volatility, macroeconomic shocks, and competitive pricing pressures. These developments exposed limitations in static underwriting assumptions and underscored the need for more adaptive and forward-looking risk-management approaches (Biener & Eling, 2012). In parallel, financial reporting requirements evolved to demand greater transparency and closer alignment between underwriting decisions and reported financial outcomes. The introduction of IFRS 17 Insurance Contracts represented a significant shift in this regard, redefining how insurers measure and recognise insurance contract performance

IFRS 17 embeds underwriting risk management directly into financial performance measurement by requiring insurers to estimate expected future cash flows, explicitly recognise a risk adjustment for non-financial risk, and defer profit recognition through the contractual service margin (CSM). Under this framework, underwriting assumptions relating to claims frequency, severity, pricing adequacy, and reinsurance effectiveness have a direct influence on fulfilment cash flows and the pattern of profit recognition over the coverage period. Consequently, underwriting decisions extend beyond operational considerations to shape earnings stability, capital strength, and reported profitability.

Within Zambia's evolving regulatory and accounting environment, the historical underwriting performance of Professional Insurance Corporation Zambia (PICZ) provides a concrete case for examining the interaction between underwriting risk management and insurer profitability. Audited financial statements show that during the period 2021–2023, PICZ consistently recorded combined ratios below 100 per cent (95 per cent in 2021, 93 per cent in 2022, and 94 per cent in 2023), indicating that claims and operating expenses were effectively controlled relative to insurance revenue. Over the same period, insurance revenue increased from approximately ZMW 966 million to ZMW 1.37 billion, while profit for the year rose from about ZMW 14.7 million to ZMW 62.7 million, suggesting that disciplined pricing, structured risk selection, and effective claims management were aligned with underlying risk exposure and contributed directly to improved underwriting

profitability. These outcomes are consistent with IFRS 17's requirement for premiums to reflect prudent estimates of fulfilment cash flows and to support the recognition of positive contractual service margins.

However, the historical performance of PICZ also reflects periods in which underwriting assumptions were tested by inflationary pressures, rising claims costs, and changing risk conditions. Variations in loss ratios and underwriting margins across reporting periods highlight the sensitivity of underwriting performance to deviations in expected cash flows and cost structures. Under IFRS 17, such deviations give rise to experience variances, which may reduce the contractual service margin and introduce volatility into insurance service results, thereby reinforcing the importance of timely repricing, exposure management, and continuous review of underwriting assumptions (IASB, 2017).

Further evidence of the role of underwriting risk management is observed in PICZ's increased reliance on diversified reinsurance arrangements. The company's audited reports indicate the use of both regional and international reinsurers, including Africa Re, ZEP-RE, Zambia Re, and global markets, as part of its strategy to mitigate large-loss volatility. This approach supports earnings stability by limiting downside risk from severe claims and improving the predictability of future cash flows. Within the IFRS 17 framework, effective reinsurance utilisation contributes to reduced uncertainty in cash-flow estimates, more robust risk adjustments, and a smoother pattern of insurance service result recognition (PwC, 2023).

Overall, the empirical evidence from PICZ's audited financial statements demonstrates that underwriting risk management particularly through disciplined pricing, selective risk acceptance, effective claims control, and strategic reinsurance utilisation has played a central role in shaping insurer profitability. This experience underscores that underwriting risk management is an adaptive and continuous process, and its effectiveness is critical to aligning underwriting decisions with financial performance measurement under IFRS 17 and sustaining profitability within Zambia's dynamic operating environment.

1.3 Statement of the problem

Underwriting risk management plays a critical role in safeguarding the profitability and financial stability of insurance companies through effective risk selection, pricing adequacy, and exposure control. However, financial performance trends at Professional Insurance Corporation Zambia Plc (PICZ) suggest persistent fluctuations in underwriting

outcomes, raising concerns about the effectiveness of existing underwriting risk-management practices.

An analysis of PICZ's audited financial results between 2017 and 2023 shows notable volatility in underwriting performance despite steady growth in premium income. The company reported underwriting profits of ZMW 17.3 million in 2017, ZMW 18.5 million in 2018, and ZMW 20.4 million in 2019, indicating relative stability during the early period. However, profitability declined sharply in 2020, when underwriting profit fell to ZMW 9.4 million, coinciding with a surge in gross claims to ZMW 210.7 million. Although performance improved in 2021 and 2022, with underwriting profits rising to ZMW 28.5 million and ZMW 53.6 million respectively, underwriting pressure re-emerged in 2023. During that year, insurance revenue increased from ZMW 1.11 billion in 2022 to ZMW 1.37 billion, yet rising costs, including net reinsurance expenses of ZMW 707.8 million and insurance service expenses of ZMW 578.5 million, resulted in a combined ratio of 94, indicating tightening underwriting margins.

Recent financial disclosures further highlight the scale of underwriting exposures. In 2024, PICZ reported insurance revenue of approximately ZMW 1.39 billion and gross written premiums of about ZMW 2.16 billion, while non-life insurance contract liabilities amounted to approximately ZMW 1.14 billion, reflecting significant claims obligations within the underwriting portfolio. These exposures occur within a challenging macroeconomic environment characterized by high inflation, currency depreciation, and rising claims settlement costs, particularly in motor and property insurance lines.

The persistence of underwriting volatility despite premium growth raises concerns regarding the adequacy of underwriting controls, pricing discipline, and reinsurance utilization within PICZ's risk-management framework. Without effective underwriting risk management, fluctuations in claims costs and external economic pressures may undermine profitability and financial stability. Consequently, this study seeks to examine how underwriting risk-management practices influence the financial performance of PICZ and to identify areas within underwriting strategy that require strengthening to support sustainable profitability in Zambia's evolving insurance market.

1.4 Aim or the purpose of the Study

This study aims to examine the impact of underwriting risk-management practices, risk assessment, selection, control, reinsurance, and pricing, on the profitability of Professional Insurance Corporation Zambia (PICZ). It evaluates how underwriting

frameworks and risk evaluation processes influence financial performance and identifies key gaps and improvement opportunities. The findings are expected to inform stronger underwriting practices and support sustainable profitability within the Zambian insurance industry.

1.5 General objective

To assess the relationship between selected underwriting risk management practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ).

1.5.1 specific objectives

- To assess the relationship between risk assessment processes and insurer profitability at Professional Insurance Corporation Zambia (PICZ).
- To assess the relationship between underwriting risk selection practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ).
- To assess the relationship between pricing and premium-setting methods and insurer profitability at Professional Insurance Corporation Zambia (PICZ).
- To assess the relationship between reinsurance arrangements and insurer profitability at Professional Insurance Corporation Zambia (PICZ).

1.5.2 Research questions

- i. What is the relationship between risk assessment processes and insurer profitability at Professional Insurance Corporation Zambia (PICZ)?
- ii. What is the relationship between underwriting risk selection practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ)?
- iii. What is the relationship between pricing and premium-setting methods and insurer profitability at Professional Insurance Corporation Zambia (PICZ)?
- iv. What is the relationship between reinsurance arrangements and insurer profitability at Professional Insurance Corporation Zambia (PICZ)?

1.5.3 Research hypothesis

H₀: Risk-assessment processes and underwriting policies have no statistically significant impact on the profitability of insurance companies.

H₁: Risk-assessment processes and underwriting policies have a statistically significant impact on the profitability of insurance companies.

H₀: Underwriting risk-management practices do not significantly influence the profitability of insurance companies.

H₁: Underwriting risk-management practices significantly influence the profitability of insurance companies.

1.6 Significance of the Study

This study is significant to Zambia's insurance sector as it provides empirical evidence on the relationship between underwriting risk-management practices and insurer profitability, with specific reference to Professional Insurance Corporation Zambia (PICZ). Despite recognition that underwriting quality strongly influences financial performance, empirical evidence from emerging markets remains limited. By examining risk assessment, pricing, risk selection, reinsurance, and control mechanisms, the study provides context-specific insights into how underwriting practices affect profitability in a volatile operating environment. The findings may assist insurers in strengthening underwriting discipline, improving operational efficiency, and managing emerging risks, while also supporting regulatory oversight and policyholder protection. Academically, the study contributes to insurance and risk-management literature by extending evidence on the underwriting–profitability relationship within developing economies (Cummins, 2017; Outreville, 2018; Eling & Jung, 2018; Veronica et al., 2024).

1.7 Research contributions

This study contributes to both the insurance industry and academic literature by examining the relationship between underwriting risk management and insurer profitability. From an industry perspective, the research provides empirical evidence on how underwriting practices, particularly risk assessment, pricing accuracy, and reinsurance utilization, affect financial performance in insurance companies. Effective underwriting risk management improves risk selection and pricing precision, which are critical determinants of underwriting profitability and financial stability in insurance operations (Cummins & Weiss, 2014; Eling & Marek, 2014). By identifying underwriting practices that enhance operational efficiency, the study provides insurers with practical insights that can assist in reducing underwriting losses, strengthening premium adequacy, and improving long-term financial sustainability.

From an academic perspective, the study extends the existing body of knowledge on insurance economics and risk management by providing empirical

1.8 Research design

This study adopts a case study research design to examine how underwriting risk-management practices influence profitability at Professional Insurance Corporation Zambia (PICZ). The design incorporates exploratory and descriptive elements to analyse how underwriting mechanisms, such as risk assessment, pricing, reinsurance utilisation, and internal controls, operate within the organisation and affect financial performance. This approach is appropriate because firm-level empirical evidence on underwriting risk management in developing insurance markets remains limited, particularly under the reporting requirements of IFRS 17 (Yin, 2018; Saunders, Lewis & Thornhill, 2019). The study uses a mixed-methods approach. Quantitative data are collected through structured questionnaires using the delivery-and-collection method, distributed to employees involved in underwriting, finance, and risk management. The questionnaire contains closed-ended questions designed to assess underwriting practices and their relationship with profitability indicators such as loss ratios and underwriting margins.

Qualitative data are obtained through semi-structured interviews with selected participants to gain deeper insights into underwriting decision-making, pricing methods, and the role of reinsurance in managing underwriting risk. Combining survey data with interview responses enables both statistical analysis and contextual interpretation of underwriting practices and profitability outcomes within PICZ (Creswell & Plano Clark, 2018).

1.9 Research approach and method

This study is grounded in a deductive research approach; whereby established theories of underwriting risk management and insurer profitability are used to formulate expectations and empirically examine the relationships between underwriting practices and financial performance at Professional Insurance Corporation Zambia. A deductive approach is appropriate where theory guides hypothesis development and data are collected to test theoretically derived relationships using observable measures (Saunders, Lewis, & Thornhill, 2019). Consistent with this approach, the study employs a quantitative-dominant mixed-methods design, relying primarily on quantitative data obtained from structured questionnaires and financial performance indicators, while incorporating limited qualitative inputs to support interpretation rather than generate theory. This methodological alignment reflects the suitability of quantitative methods for testing

theory-driven relationships, complemented by qualitative insights to enhance contextual understanding (Creswell & Plano Clark, 2018).

1.10 Data collection and analysis techniques

The study will employ a quantitative research approach using a structured online questionnaire administered through Google Forms to collect primary data from all twenty-three (23) employees within the underwriting unit at Professional Insurance Corporation Zambia, thereby adopting a census design. The use of an online, self-administered questionnaire is well aligned with quantitative research as it enables standardised measurement, facilitates efficient data collection, and enhances reliability and accuracy through automated data capture (Creswell & Creswell, 2018; Saunders, Lewis & Thornhill, 2019). The questionnaire will consist of closed-ended Likert-scale items designed to generate numerical data on underwriting risk assessment, underwriting management practices, pricing or premium-setting methods, and their perceived influence on profitability, alongside demographic variables such as age, gender, educational level, work experience, and terms of employment. Consistent with quantitative methodological principles, the structured nature of the Google Forms questionnaire supports objectivity, replicability, and statistical analysis of relationships between underwriting risk-management practices and perceived profitability outcomes (Bryman, 2016; Sekaran & Bougie, 2020).

1.11 Chapter summary

This chapter presents a comprehensive overview of the study by first outlining the research problem and providing the general background that frames the need for the investigation. It then establishes the justification for undertaking the study, demonstrating its relevance to both industry practice and academic inquiry. The chapter further articulates the research aim, objectives, and guiding questions, which collectively define the direction and scope of the analysis. Following this, the research design is introduced to explain the methodological approach adopted in addressing the stated questions. The chapter also highlights the anticipated contributions of the study to the insurance sector and scholarly literature, and concludes by presenting the hypotheses formulated from the research questions, thereby creating a coherent flow that connects the problem definition, purpose of the study, methodological pathway, and expected outcomes.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews relevant literature from various scholars on underwriting risk management practices and their relationship with profitability. It examines key theories and empirical studies relating to underwriting risk assessment, underwriting management, and pricing or premium-setting practices within the insurance industry. The chapter synthesises existing findings to highlight how effective underwriting practices influence financial performance, identifies gaps in the literature that motivate the current study, and provides a coherent theoretical and empirical foundation that guides the development of the study variables and subsequent analysis.

2.2 Regulatory framework; IFRS 17, IFRS 4 and insurance supervision in Zambia

Insurance institutions operate by underwriting, pricing, and managing risk exposures; therefore, strong regulatory oversight and transparent financial reporting are critical for protecting policyholders and maintaining financial stability within the insurance sector. Historically, financial reporting for insurance contracts lacked consistency across jurisdictions because IFRS 4 allowed insurers to continue applying diverse national accounting practices, which limited comparability and reduced transparency in insurers' financial statements (IFRS Foundation, 2017; KPMG, 2022). To address these limitations, the IFRS 17 standard was introduced as a comprehensive, principle-based framework for the recognition, measurement, presentation, and disclosure of insurance contracts. IFRS 17 requires insurance liabilities to be measured using current estimates of future cash flows, an explicit risk adjustment, and a contractual service margin (CSM), which defers profit recognition over the coverage period and aligns revenue recognition with the delivery of insurance services. By replacing the heterogeneous practices permitted under IFRS 4, IFRS 17 improves transparency, enhances international comparability of insurers' financial performance, and provides clearer information on risk exposure and profitability for users of financial statements (IFRS Foundation, 2017; PwC, 2023; Deloitte, 2023).

2.2.1 Prudential and supervisory regulation in Zambia

In Zambia, the prudential regulation of insurance companies is aligned with internationally recognised principles of financial soundness and policyholder protection.

Academic literature emphasises that effective insurance regulation is founded on capital adequacy and solvency control, risk-based supervision, robust corporate governance, and adequate actuarial valuation of technical provisions, all of which are essential for ensuring insurer stability and long-term sustainability (Cummins & Venard, 2008; Outreville, 2013; Eling & Schmeiser, 2010). Studies further indicate that strong internal controls and regulatory reporting frameworks enhance market discipline and reduce insolvency risk within insurance markets (Adams & Buckle, 2003; Klein, 2012). Within this theoretical framework, Zambia's prudential insurance oversight reflects globally accepted regulatory practices aimed at safeguarding policyholder interests and ensuring insurers' ability to meet obligations as they fall due.

The interaction between IFRS 17 and prudential insurance regulation demonstrates a complementary relationship that enhances both financial reporting quality and supervisory effectiveness. Academic literature indicates that IFRS 17 significantly improves the transparency, consistency, and comparability of insurance financial statements by introducing market-consistent measurement and explicit risk adjustment disclosures, thereby strengthening the information base available to regulators (Eling & Lehmann, 2018; Ernst & Young, 2019; PwC, 2020). This enhanced financial information enables supervisory authorities to more accurately assess insurers' risk profiles, capital adequacy, and solvency positions within a risk-based regulatory framework (Cummins & Phillips, 2009; Klein, 2012). Consequently, the alignment of international financial reporting standards with local prudential regulation supports stronger accountability, promotes improved risk-management practices, and reinforces confidence in the insurance sector. Overall, the convergence of high-quality financial reporting and effective supervisory oversight contributes to the financial stability and resilience of the insurance industry in emerging markets such as Zambia.

2.2.2 IFRS 4 Insurance contracts (interim phase)

Issued in 2004, IFRS 4 established an interim accounting framework for insurance contracts pending the development of a comprehensive standard. The standard became effective for annual reporting periods beginning on or after 1 January 2005. Its primary objective was not to harmonise measurement practices but to enhance disclosure requirements so that users of financial statements could better understand the nature of insurance risk, uncertainty, and insurer performance. Importantly, IFRS 4 permitted

insurers to retain many pre-existing local accounting practices, a feature commonly described as the “grandfathering” of national methods (PwC, 2017).

2.2.3 Limitations of IFRS 4

The flexibility permitted under IFRS 4 resulted in substantial diversity in measurement approaches across jurisdictions and companies. This diversity impaired comparability between insurers and often produced volatility in reported profits due to inconsistent treatment of discounting, contract boundaries, and liability measurement. Consequently, financial statements prepared under IFRS 4 did not always provide a consistent or transparent basis for evaluating underwriting performance across markets (KPMG, 2013). These limitations underscored the need for a principle-based, globally consistent accounting model, ultimately leading to the development of IFRS 17.

2.2.4 IFRS 17 Insurance contracts: A comprehensive measurement model

Effective for annual reporting periods beginning on or after 1 January 2023, IFRS 17 replaces IFRS 4 and introduces a single, principle-based framework for the recognition, measurement, presentation, and disclosure of insurance contracts. The standard aims to improve global comparability, transparency, and consistency in insurer reporting across jurisdictions (IFRS Foundation, 2017).

2.2.5 PIA supervision and Zambian regulatory context

In Zambia, insurance regulation significantly influences underwriting practices, pricing discipline, and risk governance within insurance institutions. The supervisory mandate of the Pensions and Insurance Authority (PIA), exercised under Insurance Act No. 38 of 2021, establishes a prudential and market-conduct framework that shapes how insurers select risks, price policies, and manage premium collection. Regulatory requirements such as licensing and fit-and-proper criteria promote sound governance by ensuring that underwriting activities are conducted within institutions that possess adequate technical expertise, internal controls, and accountable management structures. Similarly, minimum capital requirements constrain excessive risk accumulation and encourage insurers to align underwriting decisions with their financial capacity, thereby supporting prudent risk selection and portfolio diversification (Outreville, 2013; Cummins & Weiss, 2014).

Regulatory guidance on technical provisions, including the Unearned Premium Reserve (UPR), further strengthens pricing discipline by linking premium recognition to the actual

period of risk coverage. This prevents premature revenue recognition and encourages insurers to consider the full risk horizon when setting premiums. Additional supervisory measures, such as credit policies governing premium receivables, as well as AML/CFT and KYC requirements, introduce enhanced due diligence at policy inception and renewal, which influences underwriting decisions by incorporating both risk characteristics and the financial reliability of policyholders. These regulatory mechanisms collectively promote responsible underwriting and reduce the likelihood of under-pricing or excessive risk exposure within insurance portfolios (IAIS, 2020; PIA, 2022).

When considered alongside the accounting requirements of IFRS 17, the regulatory framework further reinforces underwriting discipline. IFRS 17 requires insurers to recognise losses on onerous insurance contracts earlier through current measurement of liabilities and risk adjustments, thereby increasing transparency and strengthening the link between underwriting performance and financial reporting. Together, prudential supervision and modern accounting standards create an environment that encourages sound risk selection, appropriate pricing, and sustainable profitability within the Zambian insurance sector (IFRS Foundation, 2017; Eling & Marek, 2014).

2.2.5 From ‘simple rules’ to risk – sensitive discipline

The development of insurance financial reporting reflects broader reforms aimed at strengthening transparency and risk-based supervision in the insurance sector. Under IFRS 4, insurers were permitted to apply diverse national accounting practices for insurance contracts, which reduced comparability and often failed to fully reflect the economic substance of insurance liabilities in financial statements (IFRS Foundation, 2017; Nobes & Stadler, 2015). The introduction of IFRS 17 represents a shift toward a risk-sensitive measurement framework, requiring insurance liabilities to be measured using current estimates of future cash flows, explicit risk adjustments, and a contractual service margin that aligns profit recognition with the provision of insurance services. This improves the transparency and comparability of insurers’ financial performance and strengthens the link between underwriting risk, pricing decisions, and reported profitability (Cummins & Weiss, 2014; Eling & Marek, 2014). In Zambia, these reporting reforms are complemented by the regulatory oversight of the Pensions and Insurance Authority under Insurance Act No. 38 of 2021, which enforces prudential standards relating to licensing, capital adequacy, governance, and reserving requirements. Together, risk-sensitive financial reporting and strengthened regulatory supervision enhance market

discipline and enable stakeholders to better assess insurers' financial stability and risk management practices (Outreville, 2013; IAIS, 2020).

2.3 Profitability of insurance companies

Profitability is a key indicator of the financial strength and sustainability of insurance and reinsurance institutions. It reflects an insurer's ability to absorb underwriting risk, withstand financial shocks, and maintain adequate capital to meet policyholder obligations. In addition to signalling managerial efficiency and market competitiveness, profitability is closely associated with policyholder protection and overall financial stability in the insurance sector. The determinants of profitability can broadly be classified into internal and external factors. Internal determinants include underwriting discipline, pricing adequacy, claims management efficiency, reinsurance arrangements, and expense control, all of which influence underwriting outcomes and financial performance. External determinants arise from broader environmental conditions such as macroeconomic factors, regulatory frameworks, inflation, and market competition. In Zambia, regulatory oversight by the Pensions and Insurance Authority and financial reporting requirements under IFRS 17 influence how underwriting outcomes are reflected in insurers' reported profitability (Cummins & Weiss, 2014; Eling & Marek, 2014).

While traditional financial indicators such as Return on Assets (ROA) and Return on Equity (ROE) remain useful for assessing overall financial performance, insurance analysis relies heavily on industry-specific measures that provide deeper insight into underwriting efficiency and risk management. Key indicators include the combined ratio, which incorporates the loss ratio and expense ratio to determine whether underwriting activities are profitable before investment income is considered. The loss ratio reflects the effectiveness of risk selection and pricing adequacy, while the expense ratio measures operational efficiency. Investment yield also contributes significantly to insurers' profitability, as premiums collected are invested to generate additional returns. When analysed together, these financial and insurance-specific indicators provide a comprehensive evaluation of underwriting performance, operational efficiency, and investment management within insurance institutions (Outreville, 2013; Biener & Eling, 2012).

2.4 Insurance companies risk management

In this section, the discussion shifts to the key indicators of underwriting risk management and their relationship to insurance profitability. Before presenting specific measures such as loss ratios, combined ratios, and claims frequency it is important to first provide an overview of risks within insurance companies and the corresponding risk management practices. Underwriting risk, which arises from inaccurate pricing, poor risk selection, or inadequate assessment of policyholder exposures, is central to an insurer's financial stability and performance (Horvey & Odei-Mensah, 2025). Effective risk management entails identifying, measuring, and mitigating these risks through strategies such as reinsurance arrangements, premium adequacy, claims monitoring, and capital allocation (Msomi, 2023). By understanding these mechanisms, stakeholders can evaluate how underwriting decisions impact profitability and ensure that risk-taking is aligned with the firm's financial capacity and regulatory requirements

2.4.1 Risks in insurance companies

Insurance companies operate within a complex and dynamic risk environment in which multiple interrelated exposures may significantly influence financial performance and long-term sustainability. These exposures include catastrophic losses, operational and liquidity risks, regulatory and legislative changes, as well as market and investment risks arising from fluctuations in asset values and interest rates. In addition, competitive pressures and macroeconomic conditions may affect pricing strategies, premium affordability, and claims experience, while reputational risk can undermine stakeholder confidence and organisational stability. The insurance literature consistently recognises that the interaction of underwriting, market, and operational risks makes risk management a fundamental determinant of insurer solvency and profitability (Cummins & Weiss, 2014; Eling & Marek, 2014; Outreville, 2013).

Within this context, effective underwriting risk management requires insurers to implement structured mechanisms for identifying, assessing, and mitigating risk exposures. These mechanisms typically include prudent reinsurance arrangements, sound capital management, disciplined underwriting standards, and continuous risk monitoring systems. Reinsurance, in particular, plays a critical role in transferring or diversifying large or volatile risks, thereby stabilising underwriting results and protecting capital resources. Empirical evidence indicates that insurers with stronger risk management

frameworks and well-designed reinsurance programmes are better positioned to reduce underwriting volatility and sustain long-term profitability in uncertain operating environments (Cummins et al., 2008; Biener & Eling, 2012).

2.4.2 Risk management process in insurance companies

Insurance firms rely on structured risk-management systems to identify, assess, and control risks that may affect organisational objectives and financial stability. Effective risk management supports sound underwriting decisions, strengthens governance, and improves profitability by aligning underwriting activities with the insurer's risk appetite and capital capacity (ISO, 2018; Cummins & Weiss, 2014). The risk-management process generally involves risk identification, assessment, underwriting controls, reinsurance arrangements, and continuous monitoring to ensure that risks remain within acceptable limits and organisational objectives are achieved.

Within the insurance sector, effective risk management also provides strategic value by improving underwriting performance and enhancing long-term financial sustainability. Enterprise risk-management frameworks enable insurers to identify emerging risks, improve decision-making, and maintain resilience in volatile market conditions. Empirical studies indicate that insurers with strong risk-management systems generally demonstrate better governance structures, improved underwriting performance, and stronger profitability compared with firms where risk oversight is weak or fragmented (Hoyt & Liebenberg, 2011; Eling & Marek, 2014).

2.4.3 Risk mapping as a component of risk management

Risk mapping is a practical visual technique applied during the stages of risk identification, analysis, and evaluation to support structured decision-making within insurance risk management. By plotting identified risks along two dimensions likelihood of occurrence and potential impact insurers are able to categorise exposures according to their relative severity and urgency. This representation enables management to distinguish between risks that require immediate attention, such as those with both high probability and high impact, and those that can be monitored with less immediate intervention. As a result, risk maps support the efficient allocation of resources and guide the selection of appropriate risk treatment strategies (ISO, 2018; Hopkin, 2018).

Beyond their visual simplicity, risk maps contribute meaningfully to enterprise risk management (ERM) by providing a consolidated view of diverse risks across the

organisation. They enhance communication among management, risk officers, and operational teams, ensuring that risk priorities are clearly understood and aligned with strategic objectives. In this way, risk mapping strengthens the practical implementation of risk management processes by translating technical assessments into an accessible format that informs governance, oversight, and strategic planning (Lam, 2014; COSO, 2017)

2.4.4 Underwriting factors that affect the quality of risk management.

Underwriting quality in the insurance industry has weakened in many markets due to persistent deviations from established underwriting and pricing standards. One major factor contributing to this decline is aggressive price competition, where insurers underprice premiums to attract or retain clients. Although such strategies may increase market share in the short term, they weaken actuarial pricing principles by disconnecting premiums from actual risk exposure. Studies conducted in emerging insurance markets indicate that persistent price undercutting contributes significantly to underwriting losses and weakens pricing discipline, particularly in highly competitive insurance portfolios (Munda, 2019; Outreville, 2013). In addition, inadequate reserving practices and weak capital planning expose insurers to solvency risks when premium income becomes insufficient to absorb claims volatility and long-term liabilities (Cummins & Weiss, 2014; Eling & Marek, 2014).

Operational inefficiencies further contribute to declining underwriting quality within insurance firms. Many insurers continue to rely on outdated pricing models and fragmented data systems, which limit the accuracy of risk assessment and increase the likelihood of mispricing and adverse selection (Biener & Eling, 2012; Cummins et al., 2008). Weak enforcement of premium payment conditions and inadequate underwriting controls also undermine financial performance by increasing policy lapses, liquidity challenges, and claims disputes. Overall, inaccurate risk assessment resulting from poor data quality, weak underwriting governance, and ineffective pricing frameworks negatively affects insurer profitability and solvency. Strengthening underwriting governance, improving data quality, and maintaining disciplined pricing systems are therefore essential for sustaining financial stability and long-term performance in the insurance industry (Hoyt & Liebenberg, 2011; Biener & Eling, 2012).

2.5 Empirical review

2.5.1 Global perspective (world)

Empirical studies across global insurance markets consistently show that underwriting profitability is influenced by cyclical premium pricing, particularly in long-tail lines such as liability insurance. Evidence from developed markets indicates that prolonged periods of soft pricing, driven by intense competition, often result in sustained underwriting losses. These losses typically lead to capital erosion, which then triggers corrective premium increases and a subsequent recovery in profitability. Research suggests that underwriting cycles persist due to delayed loss recognition and competitive behaviour rather than purely rational pricing decisions (Cummins & Outreville, 2018).

Global empirical evidence highlights the prevalence of market-following behaviour in premium-setting. Insurers frequently align their pricing with prevailing market rates to protect market share, even when such rates are technically inadequate. Studies using insurer-level data from Europe and North America find that this herding behaviour increases earnings volatility and weakens long-term profitability. In contrast, insurers that maintain disciplined, risk-adjusted pricing demonstrate more stable underwriting performance across market cycles, despite potentially lower short-term premium growth (Eling & Schmit, 2018).

Recent empirical research further indicates that optimal underwriting outcomes depend on factors such as capital adequacy, demand elasticity, and expectations of future market recovery. Quantitative analyses show that well-capitalized insurers are better positioned to sustain technically sound pricing during soft markets and achieve superior long-term performance. Conversely, loss-leading strategies are associated with higher insolvency risk, particularly in competitive or data-constrained environments (Harrington et al., 2020). From a global risk management perspective, empirical studies emphasize the role of underwriting controls and data quality in shaping profitability. Cross-regional evidence demonstrates that insurers with robust risk assessment frameworks and integrated pricing systems experience lower loss ratios and greater financial stability. These findings are especially relevant for developing markets, where weak underwriting governance and data limitations heighten exposure to prolonged underwriting losses. Overall, the empirical literature underscores that sustainable insurance profitability depends on disciplined underwriting, effective risk management practices, and resistance to purely market-driven pricing behaviour (OECD, 2023)

2.5.2. Region perspective (Africa)

Empirical studies from the African insurance market indicate that underwriting and risk management practices play a critical role in shaping insurer profitability within competitive and volatile environments. Blessing (2024) provides regional evidence showing that insurers operating in emerging African markets can enhance profitability through the adoption of advanced risk assessment techniques and more efficient underwriting processes. The study demonstrates that the integration of predictive analytics, actuarial models, and data-driven underwriting improves risk evaluation and pricing accuracy, leading to lower loss ratios. Additionally, the use of dynamic underwriting practices, such as tailored policy conditions and real-time data utilization, enables insurers to respond more effectively to evolving risk profiles, thereby strengthening financial performance. These findings are consistent with broader insurance research which emphasizes that improved underwriting discipline, risk-based pricing, and analytical modelling enhance insurer performance and underwriting efficiency (Cummins & Weiss, 2014; Eling & Jung, 2018; Harrington, 2017).

These findings are particularly relevant to Southern African insurance markets, including Zambia, where insurers face challenges related to premium volatility, underwriting risk, and limited data infrastructure. Similar to other regional markets, Zambian insurers operate in highly competitive environments that often encourage price-based competition at the expense of underwriting discipline. Studies examining insurance markets in developing economies suggest that weak underwriting governance, aggressive price competition, and inadequate actuarial pricing frequently lead to deteriorating loss ratios and unstable profitability (Outreville, 2018; Cummins, Rubio-Misas & Vencappa, 2017). By examining how insurers within the region implement risk management frameworks and underwriting strategies, this study seeks to assess whether the adoption of advanced risk assessment tools and dynamic underwriting practices contributes to improved profitability. Strengthening the alignment between risk exposure and premium income is expected to enhance financial stability and support sustainable growth in the Zambian insurance sector.

Further regional empirical evidence is provided by Morara and Sibindi (2021), who examined the relationship between solvency, underwriting risk, and financial performance in Kenya's insurance industry. Using secondary data from the Insurance Regulatory Authority covering the period 2009 to 2018, the study found a positive

relationship between solvency levels and financial performance, suggesting that well-capitalized insurers tend to achieve superior profitability. Interestingly, underwriting risk, measured by the combined ratio, was also positively associated with financial performance, indicating that insurers may achieve higher returns while assuming greater underwriting risk, provided such risk is supported by adequate solvency and effective risk management practices. Similar findings have been reported in international insurance literature, which suggests that insurers that strategically manage underwriting risk alongside adequate capital buffers are better positioned to sustain profitability in competitive markets (Cummins & Nini, 2002; Eling & Marek, 2014).

Overall, regional empirical evidence suggests that profitability in African insurance markets is not driven solely by conservative risk avoidance but by the strategic management of underwriting risk, pricing discipline, and capital adequacy. These findings provide important empirical support for the current study, which investigates whether similar relationships between underwriting practices, risk management, and profitability exist within the Zambian insurance market

2.5.3 Local perspective

Empirical evidence from South Africa further highlights the critical role of underwriting practices in determining insurer profitability. Msomi (2023) conducted a panel data analysis of publicly listed general insurance companies in South Africa over the period 2008 to 2019 to examine the determinants of underwriting profitability. The study found that underwriting profit exerts a positive and statistically significant effect on return on assets (ROA), confirming that effective underwriting is a key driver of financial performance. Factors such as premium income, loss ratio, expense ratio, and reinsurance utilization were shown to directly influence underwriting outcomes, reinforcing the centrality of underwriting discipline in sustaining insurer profitability.

Importantly, Msomi (2023) demonstrated that the relationship between underwriting profit and firm performance is not linear but moderated by both internal and external firm characteristics. Investment size, shareholder funds, and operational expenses were identified as key mediating variables. While increased premium income enhanced underwriting profitability, high operational costs diluted its impact on overall performance. In addition, insurers with larger shareholder funds were better positioned to absorb underwriting risk, allowing underwriting profits to translate more effectively into improved financial outcomes. These findings underscore the importance of capital

strength and cost efficiency in complementing underwriting risk management. The study also revealed that excessive reliance on reinsurance, although effective in reducing underwriting risk exposure, weakened the direct contribution of underwriting profit to overall profitability. This suggests that while reinsurance remains a vital risk management tool, overdependence can erode retained earnings and limit profitability. Consequently, insurers must strike a balance between risk transfer and retaining profitable risks to optimize underwriting performance. Overall, Msomi's findings emphasize that underwriting profitability is maximized when robust underwriting practices are supported by prudent expense management, balanced reinsurance strategies, and effective capital allocation.

Additional local empirical evidence from South Africa further supports these conclusions. Slyvester (2023) examined underwriting performance in both life and non-life insurance sectors between 2013 and 2019 using generalized method of moments and bootstrap quantile regression techniques. The study found that insurer size, market share, and investment income had significant positive effects on underwriting performance, indicating that larger and more established insurers benefit from economies of scale and diversified income streams. Conversely, rapid premium growth was shown to weaken underwriting performance in both sectors, suggesting that aggressive expansion strategies may compromise risk assessment quality and claims control.

The study also identified sector-specific dynamics in the role of reinsurance and underwriting risk. Reinsurance improved underwriting performance among non-life insurers but demonstrated weaker or adverse effects within the life insurance sector, reflecting differences in product structures, liability duration, and risk exposure. Underwriting risk was also found to negatively affect performance within the non-life insurance sector, while its adverse effect became more pronounced at higher performance levels within life insurance companies, indicating increased vulnerability to risk concentration. Furthermore, solvency exhibited a U-shaped relationship with underwriting performance, where weak solvency positions reduced financial outcomes while stronger capital adequacy enhanced insurers' ability to absorb underwriting shocks and maintain stability. These findings reinforce the importance of disciplined underwriting practices, effective reinsurance utilisation, and strong solvency management in sustaining insurer profitability and financial resilience within insurance markets (Alhassan & Biekpe, 2016; Cummins & Weiss, 2014; Eling & Marek, 2014; Biener & Eling, 2012).

2.6 Theoretical framework

The study is anchored in Expected Utility Theory, Risk Theory, and Agency Theory, which collectively explain how underwriting risk-management practices influence insurer profitability. Expected Utility Theory suggests that insurers make underwriting and pricing decisions under uncertainty to maximize financial outcomes (von Neumann & Morgenstern, 1947). Risk Theory emphasizes the importance of premium adequacy, diversification, reserving, and capital management in maintaining solvency and long-term profitability (Gerber, 1979). Agency Theory highlights how weak governance and misaligned incentives between shareholders, managers, and underwriters may encourage underpricing and excessive risk-taking that negatively affect financial performance (Jensen & Meckling, 1976). Together, these theories provide a foundation for understanding how effective risk management and sound governance support underwriting performance and insurer profitability.

2.6.1 Expected utility theory (EUT)

Expected Utility Theory was developed by John von Neumann and Oskar Morgenstern (1944) to explain rational decision-making under uncertainty. The theory proposes that decisions are made by maximizing expected utility rather than expected monetary value, with choices evaluated according to possible outcomes and their probabilities. In the insurance industry, the theory explains how insurers assess uncertain risks and make underwriting and pricing decisions to minimise potential losses.

The theory is particularly relevant to insurance underwriting because practices such as actuarially adequate pricing, enforcement of the ninety-day Premium Payment Warrant (PPW), and full risk disclosure help reduce uncertainty and align premiums with actual risk exposure. These practices improve risk predictability, minimise adverse selection, and support stable profitability. Empirical studies further show that insurers applying disciplined underwriting and risk-based pricing generally achieve stronger and more sustainable financial performance than insurers prioritising premium growth over underwriting discipline (Cummins & Venard, 2008; Harrington & Niehaus, 2021).

2.6.2 Risk theory (ruin theory)

Risk Theory, developed through the early work of Lundberg (1909) and later formalized by Cramér (1930), provides a probabilistic framework for understanding the financial stability of insurance firms under uncertain claim dynamics. The theory models an insurer's surplus as a stochastic process where premium inflows are offset by random claim occurrences, implying that the probability of ruin depends on premium adequacy, claim frequency and severity, and the sufficiency of technical reserves.

In underwriting risk management, Risk Theory highlights the importance of disciplined underwriting practices that maintain a balance between risk exposure and available capital. Weak underwriting behaviours such as underpricing, poor premium collection, or ambiguous policy conditions increase claim outflows relative to premium income and raise the probability of insolvency. Empirical and theoretical research shows that insurers applying actuarially sound pricing, enforcing premium payment conditions, and maintaining adequate reserves achieve stronger solvency and more stable profitability (Cramér, 1930; Lundberg, 1909; Asmussen & Albrecher, 2010).

2.6.3 Agency theory

Agency Theory, introduced by Jensen and Meckling (1976), explains how conflicts of interest arise between shareholders (principals) and managers (agents) who control day-to-day operations. In insurance firms, this conflict can influence underwriting decisions when managers pursue short-term objectives such as rapid premium growth or increased market share by underpricing risks or relaxing underwriting standards.

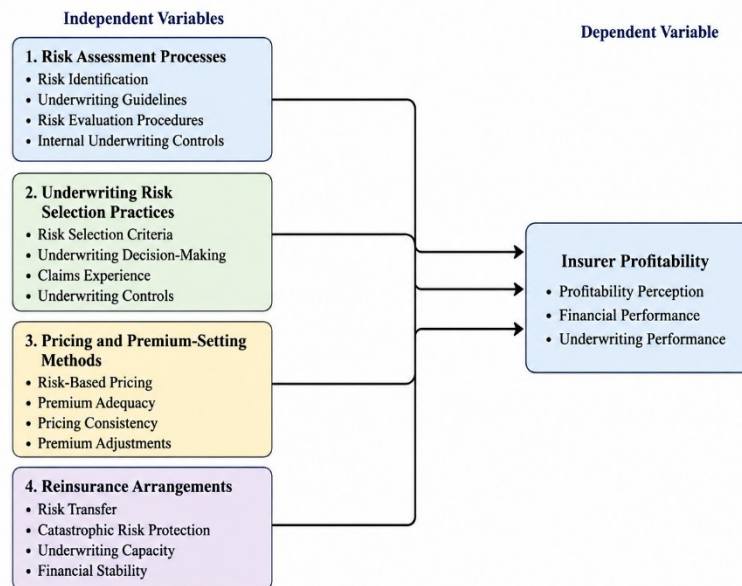
Within underwriting risk management, governance mechanisms such as strict underwriting guidelines, enforcement of premium payment conditions, and clear policy terms help align managerial decisions with shareholder interests. Empirical studies show that insurers with stronger governance structures and better incentive alignment demonstrate improved underwriting discipline, lower loss ratios, and more stable financial performance (Jensen & Meckling, 1976; Cummins et al., 2009).

Together, Expected Utility Theory, Risk Theory, and Agency Theory provide a complementary framework for analysing underwriting risk management and insurer profitability. Expected Utility Theory explains rational decision-making under uncertainty, Risk Theory highlights the solvency implications of underwriting decisions, and Agency Theory addresses governance factors that influence underwriting behaviour. Collectively, these perspectives provide a comprehensive theoretical foundation for

examining how underwriting practices affect profitability and financial stability in insurance companies.

2.7 Conceptual framework

Conceptual Framework: Underwriting Risk Management Practices and Insurer Profitability



In this study, the independent variables comprise risk assessment processes, underwriting risk selection practices, pricing and premium-setting methods, and reinsurance arrangements. Risk assessment processes involve the identification, evaluation, and classification of risks before insurance coverage is granted. Underwriting risk selection practices focus on the application of underwriting guidelines, risk selection criteria, claims experience, and underwriting controls to ensure that acceptable risks are selected. Pricing and premium-setting methods involve determining premiums that accurately reflect the level of risk assumed by the insurer, while reinsurance arrangements relate to the transfer of underwriting risks to reinsurers to enhance underwriting capacity and protect the insurer against large or catastrophic losses.

The dependent variable is insurer profitability, which reflects the financial performance of the insurer arising from underwriting activities. In this study, insurer profitability is assessed based on respondents' perceptions of financial performance and underwriting outcomes. The conceptual framework proposes that each of the four underwriting risk management practices is associated with insurer profitability. Existing literature suggests that effective risk assessment, prudent underwriting risk selection, appropriate pricing and

premium-setting methods, and sound reinsurance arrangements are important components of underwriting risk management that support improved underwriting performance and financial sustainability (Cummins & Weiss, 2014; Eling & Marek, 2014; Harrington & Niehaus, 2021).

2.8 Chapter summary

This chapter reviewed theoretical and empirical literature on underwriting risk management and its influence on insurer profitability. The review drew on global, regional, and local studies which collectively show that underwriting discipline, risk-based pricing, and effective risk management are key determinants of sustainable profitability in insurance companies, while excessive competition and weak underwriting controls often lead to under-pricing and financial instability. Evidence from African markets further highlights the importance of solvency, capital adequacy, and governance structures in supporting sound underwriting outcomes. The review was guided by Expected Utility Theory, Risk Theory, and Agency Theory, which together explain underwriting decisions under uncertainty, the solvency implications of risk exposure, and governance factors that influence underwriting behaviour. Overall, the literature confirms the importance of underwriting risk management in shaping insurer performance, while also revealing limited empirical evidence specific to the Zambian insurance market, thereby justifying the need for this study.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The methodology chapter outlines the research design, philosophical assumptions, and methodological choices that guide the investigation into the effects of underwriting risk management practices on the profitability of insurance companies. The purpose of this section is to provide a clear rationale for the selected research approach and to demonstrate how it aligns with the research objectives. By employing the framework of Saunders et al.'s research onion, the study systematically justifies decisions concerning the research philosophy, approach, methodological choice, strategy, time horizon, and data collection techniques. This structured approach ensures that the research process is rigorous, transparent, and replicable, thereby enhancing the credibility of the findings. Moreover, the methodology is designed to balance both quantitative analysis, which captures measurable relationships between risk management and profitability, and qualitative insights, which provide a deeper understanding of managerial practices and perspectives within the insurance industry.

3.2 Research philosophy

This study adopts a positivist research philosophy, which provides the foundation for examining the relationship between selected underwriting risk management practices and insurer profitability using objective and measurable data. Positivism is appropriate because it emphasises the collection and analysis of numerical data through structured research methods to test relationships between variables (Saunders, Lewis, & Thornhill, 2019).

The philosophy aligns with the quantitative research design adopted in this study, where data are collected using a structured questionnaire administered to employees in the underwriting department at Professional Insurance Corporation Zambia (PICZ). The collected data are analysed using descriptive and inferential statistical techniques to establish the relationship between selected underwriting risk management practices and insurer profitability. Adopting a positivist philosophy enhances the objectivity, reliability, and credibility of the study findings.

3.3 Research approach

This study will be guided by a largely deductive approach, drawing on established theories of risk management and profitability to formulate hypotheses and design data collection instruments. The deductive approach allows for the testing of theoretical propositions regarding the relationship between underwriting risk management practices and profitability outcomes (Saunders, Lewis, & Thornhill, 2019). However, consistent with the pragmatic philosophy, the study remains open to inductive insights that may emerge from industry-specific practices and managerial perspectives. This flexible approach enables the research to capture unexpected findings and contextual nuances that may not be fully addressed by existing theories. By combining deductive and inductive reasoning, the study achieves a balanced examination of both theoretical expectations and empirical realities. This iterative movement between theoretical frameworks and empirical observations is characteristic of well-designed mixed methods research.

3.4 Research design

This study adopted a quantitative case study research design to examine the relationship between selected underwriting risk management practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ). A quantitative design was appropriate because it facilitated the collection and analysis of numerical data through a structured questionnaire administered to employees in the underwriting department. The data were analysed using descriptive and inferential statistical techniques to address the study objectives.

A case study design was employed because the research focused on a single organisation, allowing for an in-depth examination of underwriting risk management practices within their real-life organisational context. This approach provided a detailed understanding of the relationship between risk assessment processes, underwriting risk selection practices, pricing and premium-setting methods, reinsurance arrangements, and insurer profitability at PICZ.

3.5 Research strategy

This study employed a case study strategy, focusing on Professional Insurance Corporation Zambia (PICZ) as the study site. The case study strategy was considered appropriate because it enabled an in-depth examination of the relationship between selected underwriting risk management practices and insurer profitability within a real-

life organisational context (Yin, 2018). By focusing on a single organisation, the study provided a detailed understanding of underwriting practices while ensuring the research remained feasible within the available time and resources. The findings are expected to provide insights that may contribute to improving underwriting risk management practices within PICZ and similar insurance institutions.

3.6 Population and sampling strategy

3.6.1 Target population

The target population for this study comprised all 23 employees in the Underwriting Department at Professional Insurance Corporation Zambia (PICZ). The population included underwriters, risk analysts, unit managers, and departmental heads who are directly involved in underwriting risk management activities. Given the relatively small and manageable size of the population, a census approach was adopted, whereby all members of the underwriting department participated in the study. According to Moore et al. (2009), a census involves collecting data from every member of the target population. The use of a census ensured comprehensive coverage of the population and enhanced the credibility of the study findings by eliminating sampling error within the department.

3.6.2 Census strategy justification

A census strategy was adopted because the target population comprised only 23 employees, making it practical to include every member of the underwriting department in the study. By collecting data from the entire population, the study eliminated sampling error and ensured that the findings reflected the views of all employees involved in underwriting risk management. The census approach enhanced the credibility and representativeness of the findings, as every eligible participant had an opportunity to contribute to the study.

3.7 Time horizon

Given the time and resource constraints of this academic research, the study will take a cross-sectional time horizon, capturing a snapshot of current underwriting risk management practices and profitability outcomes at a single point in time. While a longitudinal approach would potentially reveal trends and changes in risk management practices and their effects on profitability over time, the cross-sectional design is appropriate for this study's scope and objectives (Saunders et al., 2019). The findings will

provide valuable insights into the current state of underwriting risk management at PICZ and its relationship with profitability, while acknowledging the potential value of longitudinal analysis in future research.

3.8 Data collection methods

3.8.1 Primary data collection

A structured questionnaire was used as the primary data collection instrument to obtain both demographic and research-specific information. The questionnaire captured respondents' demographic characteristics, including age, gender, level of education, job experience, and position within the organisation, providing contextual information for interpreting the findings. It also collected data on respondents' perceptions of selected underwriting risk management practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The questionnaire was administered to all 23 employees in the underwriting department, ensuring complete coverage of the target population through a census approach. The use of a structured questionnaire facilitated the efficient collection of standardised data, enhanced consistency in responses, and improved the reliability of the study findings.

3.9 Data analysis and presentation

3.9.1 Data preparation

Following data collection, the completed questionnaires were checked for completeness, consistency, and accuracy. Responses to the closed-ended questions were coded and entered into the Statistical Package for the Social Sciences (SPSS) version 21.0 for analysis. Data cleaning was conducted using frequencies and cross-tabulations to identify and correct any errors or inconsistencies. The analysed data were subsequently presented in tables, charts, and graphs to facilitate interpretation and presentation of the study findings.

3.9.2 Descriptive analysis

Descriptive statistics, including frequencies, percentages, means, and standard deviations, will be computed to summarise the demographic characteristics of respondents and their responses to questions about underwriting risk management practices. These statistics provide an overview of the data and enable the researcher to identify patterns and trends in the responses.

3.9.3 Inferential analysis

Inferential statistical analysis was conducted to examine the relationships between the study variables. Given the ordinal nature of the Likert-scale data and the relatively small census population of 23 respondents, Spearman's rank correlation coefficient was used to determine the strength and direction of the relationship between the independent variables, risk assessment processes, underwriting risk selection practices, pricing and premium-setting methods, and reinsurance arrangements, and the dependent variable, insurer profitability. Statistical significance was assessed at a 95% confidence level and a 5% level of significance ($p < 0.05$). The results of the correlation analysis were used to determine whether significant relationships existed between the selected underwriting risk management practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ).

3.10 Validity and reliability

3.10.1 Validity

The research will use a guided questionnaire to assess the adequacy of risk assessment processes and policies on underwriting risk management practices and their effect on profitability at Professional Insurance Corporation. This questionnaire will be refined through a rigorous review of existing literature and aligned with the study objectives. The development and refinement of the questionnaire will be guided by the supervisor, drawing on his expertise in the field of research. Content validity will be ensured by ensuring that questionnaire items adequately cover all dimensions of underwriting risk management practices identified in the literature. The validity of the findings will be ensured through the creation of a robust study design, the selection of an appropriate method and population, as well as the meticulous and consistent execution of the research process.

3.10.2 Reliability

To enhance the reliability of the data collected, a pilot study will be conducted with a small group of respondents from the target population to test the clarity, comprehensibility, and appropriateness of the questionnaire items. Feedback from the pilot study will be used to refine the instrument before full administration. Additionally, participants will be instructed not to discuss the questionnaire with colleagues; instead, any queries will be directed to the researcher, who will provide guidance as necessary.

Internal consistency reliability will be assessed using Cronbach's alpha coefficient, with a value of 0.70 or above considered acceptable (Nunnally & Bernstein, 1994).

3.11 Ethical considerations

The consideration of ethical issues in business research has become an increasingly important area of organisational inquiry (Crane, 1999). Ethics in research refers to the appropriateness of one's conduct in relation to the rights of participants and all those who may be affected by the study (Saunders et al., 2019). Addressing these issues is critical in ensuring credibility, trustworthiness, and acceptance of research findings (Resnik, 2018). The 2016 CIOMS International Ethical Guidelines for Health-related Research Involving Humans have served as a foundational framework for ethical research practices globally, particularly in areas of informed consent and research ethics .

3.11.1 Consent process

In line with ethical research guidelines, a consent document will be used to guide the verbal explanation of the study to potential respondents. Consent will be sought prior to participation, and participants will be provided with sufficient information about the purpose, objectives, and implications of the research (Fouka & Mantzourou, 2011). They will be encouraged to ask questions and consider their involvement carefully to ensure informed decision-making (Bryman, 2016). Respondents who agree to participate will complete and sign a voluntary agreement form, which will be securely stored. The researcher will also continue to update participants with relevant information as needed throughout the study (Israel & Hay, 2006).

3.11.2 Confidentiality

To safeguard participants, strict measures will be taken to maintain confidentiality and anonymity. Respondents' identities will be concealed during data collection, analysis, and reporting (Creswell & Creswell, 2018). The collected data will be used solely for academic purposes, and access will be limited to the researcher and relevant academic authorities. This aligns with the principles of the Declaration of Helsinki (World Medical Association, 2013), which underscores the importance of protecting participants from unauthorised disclosure of personal information.

3.11.3 Benefits

This study is expected to enhance the researcher's academic development and analytical skills in pursuit of a Master's degree in Financial Risk Management. More importantly, it will contribute to the growing body of knowledge on the adequacy of underwriting risk management practices in insurance companies (Alhassan & Fiador, 2014). Respondents will also benefit from participating in a research process that highlights key aspects of their professional practice and may inform improvements in underwriting strategies to enhance organisational profitability (Cummins & Rubio-Misas, 2006).

3.11.4 Risks

Although minimal, some questions may cause inconvenience or discomfort to participants, particularly in relation to sensitive aspects of risk management practices. Such discomfort may manifest as anxiety, frustration, or embarrassment (Sieber, 2000). As noted by Diener and Crandall (1978), ethical dilemmas often arise in social research when participants feel pressure or discomfort, hence the need for careful design of research instruments.

3.11.5 Mitigation of risks

Participation will be voluntary, and no respondent will be coerced into completing the questionnaire (Bell, Bryman, & Harley, 2019). The study will exclude individuals under the age of 18, and participants will retain the right to ask questions or withdraw at any stage without facing negative consequences (Orb, Eisenhauer, & Wynaden, 2001). The researcher will remain guided by the supervisor to minimise bias and ensure adherence to ethical standards (Saunders et al., 2019).

3.11.6 Study withdrawals

Respondents will be informed of their right to withdraw from the study at any time. In line with research ethics, participants will not be obligated to provide reasons for withdrawal, and such decisions will be respected (Bryman, 2016). Data collected from participants who withdraw will not be used in the analysis, and any previously collected data will be destroyed upon request.

3.12 Chapter summary

This chapter has outlined the methodological framework guiding the investigation into the effects of underwriting risk management practices on profitability at Professional

Insurance Corporation Zambia. The study adopts a pragmatic research philosophy, a largely deductive approach, and a mixed methods design combining quantitative and qualitative data collection. A case study strategy focusing on PICZ is employed, with a census approach targeting all 32 staff members in the Underwriting Risk Management Unit. Data will be collected through structured questionnaires and analysis of company documents. Quantitative data will be analysed using descriptive and inferential statistics, including Pearson correlation and multiple regression analysis. The validity and reliability of the findings will be ensured through careful instrument design, pilot testing, and methodological triangulation. Ethical considerations, including informed consent, confidentiality, and the right to withdraw, will be strictly observed throughout the research process. The next chapter will present the analysis and findings of the study

CHAPTER FOUR: RESEARCH FINDINGS AND ANALYSIS

4.0 Introduction

This chapter presents the analysis and interpretation of data collected from employees within the underwriting unit at Professional Insurance Corporation Zambia (PICZ). The analysis is guided by the study objectives and includes descriptive statistics, reliability testing, correlation analysis, and regression analysis.

4.1 Profiles of respondents

A total of 23 respondents from the underwriting unit at Professional Insurance Corporation Zambia participated in the study, representing a 100% response rate under the census approach adopted by the research. The respondent profile revealed a relatively balanced gender distribution, with 12 respondents (52.2%) being male and 11 respondents (47.8%) female, indicating adequate representation of both genders. In terms of age, the majority of respondents were within the economically active and professionally experienced age groups, with 34.8% aged 20–29 years, 30.4% aged 30–39 years, 26.1% aged 40–49 years, and only 8.7% aged 50 years and above. The findings further showed that respondents possessed high educational qualifications, as 56.5% held Master's degrees, 34.8% held Bachelor's degrees, and 4.3% possessed PhD qualifications. Regarding work experience, most respondents demonstrated moderate to extensive industry exposure, with 39.1% having 6–10 years of experience, 26.1% having more than 10 years, while 17.4% each had 2–5 years and less than 2 years of experience respectively. Overall, the demographic profile suggests that respondents were sufficiently qualified and experienced to provide credible and informed insights into underwriting risk-management practices and their effect on profitability.

4.2 Assessment of the Relationship Between Risk Assessment Processes and Insurer Profitability

This section presents findings relating to the first research objective, which sought to assess the relationship between risk assessment processes and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The analysis includes reliability testing, descriptive statistics, and Spearman's rank correlation analysis.

4.2.1 Reliability Analysis

Prior to the main statistical analysis, the internal consistency of the questionnaire items measuring risk assessment processes was assessed using Cronbach's Alpha. A Cronbach's Alpha coefficient of 0.70 or above was considered acceptable for establishing the reliability of the measurement instrument. The analysis produced a Cronbach's Alpha value of **0.81**, indicating good internal consistency among the questionnaire items. This suggests that the instrument was reliable for measuring respondents' perceptions of risk assessment processes and was therefore suitable for further statistical analysis.

4.2.2 Descriptive Statistics

Descriptive statistics were computed to summarise respondents' perceptions of risk assessment processes at PICZ. Mean scores and standard deviations were used to determine the level of agreement with each statement. The findings revealed generally high levels of agreement regarding the adequacy of risk assessment practices within the organisation.

Table 1: Data Summary

Statement	Mean	Std. Dev.	Interpretation
Risk assessment procedures are clearly defined	3.7	1.15	Agree
Adequate data (e.g. loss ratios) are used when evaluating risks	3.43	1.04	Agree
Risk selection criteria (underwriting guidelines) are consistently applied	3.65	1.19	Agree
Risk survey reports effectively identify high-risk clients	4.09	0.79	Agree
Underwriting guidelines and regulations are strictly followed	3.68	0.84	Agree
Underwriting performance is regularly monitored	3.82	1.01	Agree
Claims experience is used to improve underwriting	4.22	0.67	Strongly Agree

decisions			
Internal controls minimise underwriting errors	4.17	0.58	Strongly Agree

Source; Researchers questionnaire 2026

Descriptive statistics were used to examine respondents' perceptions of risk assessment processes at Professional Insurance Corporation Zambia (PICZ). The findings indicate that respondents generally agreed that the organisation has effective risk assessment processes to support underwriting decisions. The highest mean score was recorded for the statement that claims experience is used to improve underwriting decisions (Mean = 4.22; SD = 0.67), followed by internal controls to minimize underwriting errors (Mean = 4.17; SD = 0.58), reflecting strong agreement on the importance of these practices. Respondents also agreed that risk survey reports effectively identify high-risk clients, underwriting performance is regularly monitored, and underwriting guidelines are consistently applied. The lowest mean score was recorded for the use of adequate data in risk evaluation (Mean = 3.43; SD = 1.04), although respondents still generally agreed with the statement. Overall, the findings suggest that respondents perceive the organisation's risk assessment processes as effective, with relatively low standard deviation values indicating reasonable consistency in their responses.

Overall, the descriptive findings suggest that respondents perceive risk assessment processes as an important component of effective underwriting risk management and insurer profitability.

4.3 Assessment of the Relationship Between Underwriting Risk Selection Practices and Insurer Profitability

This section presents findings relating to the second research objective, which sought to assess the relationship between underwriting risk selection practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The analysis includes reliability testing, descriptive statistics, and Spearman's rank correlation analysis.

4.3.1 Reliability Analysis

The internal consistency of the questionnaire items measuring underwriting risk selection practices was assessed using Cronbach's Alpha. The analysis yielded a Cronbach's Alpha coefficient of 0.84, which exceeded the recommended threshold of 0.70, indicating good

internal consistency. The findings suggest that the questionnaire items reliably measured respondents' perceptions of underwriting risk selection practices and were suitable for further statistical analysis.

4.3.2 Descriptive Statistics on Underwriting Risk Selection Practices

Descriptive statistics were computed to summarise respondents' perceptions of underwriting risk selection practices at Professional Insurance Corporation Zambia (PICZ). Mean scores and standard deviations were used to determine the level of agreement with each statement relating to underwriting decision-making, risk selection, and underwriting controls.

Table 2: Data Summary

Statement	Mean	Std. Dev.	Interpretation
Claims experience is used to improve underwriting decisions	4.22	0.67	Strongly Agree
Internal controls minimise underwriting errors	4.17	0.58	Strongly Agree
Effective underwriting practices improve profitability	4.41	0.73	Strongly Agree
The company maintains stable and consistent financial performance	3.91	0.81	Agree

Source; Researchers questionnaire 2026

Descriptive statistics were used to examine respondents' perceptions of underwriting risk selection practices at Professional Insurance Corporation Zambia (PICZ). The findings indicate that respondents generally perceived the organisation's underwriting risk selection practices positively. The highest mean score was recorded for the statement that effective underwriting practices improve profitability (Mean = 4.41; SD = 0.73), indicating strong agreement that prudent underwriting contributes to organisational performance. Respondents also strongly agreed that claims experience is used to improve underwriting decisions (Mean = 4.22; SD = 0.67) and that internal controls minimise underwriting errors (Mean = 4.17; SD = 0.58), reflecting confidence in the organisation's underwriting controls and decision-making processes. The statement that the company maintains stable and consistent financial performance recorded a mean of 3.91 (SD =

0.81), indicating general agreement among respondents. Overall, the findings suggest that respondents perceive underwriting risk selection practices as effective, with the relatively low standard deviation values indicating a reasonable level of consistency in their responses.

Overall, the descriptive findings demonstrate that respondents perceive underwriting risk selection practices as essential for promoting sound underwriting decisions, minimising adverse selection, and supporting insurer profitability.

4.3.3 Spearman's Rank Correlation Analysis

Spearman's rank correlation analysis was conducted to determine the strength and direction of the relationship between underwriting risk selection practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The analysis revealed a positive but statistically non-significant relationship between the two variables ($\rho = 0.371$, $p = 0.081$). Although the positive correlation suggests that improved underwriting risk selection practices tend to be associated with higher levels of perceived insurer profitability, the relationship was not statistically significant at the 5% significance level.

Table 3: Data Summary

Variables	Spearman's rho (ρ)	p-value	Interpretation
Underwriting Risk Selection Practices and Insurer Profitability	0.371	0.081	Positive, weak-to-moderate relationship; not statistically significant at the 5% level

Source; Researchers questionnaire 2026

Spearman's rank correlation analysis was conducted to determine the relationship between underwriting risk selection practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The findings revealed a **positive but statistically non-significant relationship** between underwriting risk selection practices and insurer profitability ($\rho = 0.371$, $p = 0.081$). Although the positive coefficient suggests that better underwriting risk selection practices are associated with higher levels of perceived profitability, the relationship was not statistically significant at the 5% significance level ($p > 0.05$). Therefore, the study did not find sufficient evidence to conclude that the relationship was statistically significant.

Overall, the findings support the view that effective underwriting risk selection practices are positively associated with insurer profitability and constitute an important component of sound underwriting risk management.

4.4 Assessment of the Relationship Between Pricing and Premium-Setting Methods and Insurer Profitability

This section presents findings relating to the third research objective, which sought to assess the relationship between pricing and premium-setting methods and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The analysis includes reliability testing, descriptive statistics, and Spearman's rank correlation analysis.

4.4.1 Reliability Analysis

The reliability of the questionnaire items measuring pricing and premium-setting methods was assessed using Cronbach's Alpha. The analysis produced a Cronbach's Alpha coefficient of 0.79, indicating acceptable internal consistency and confirming that the questionnaire items were reliable for further statistical analysis.

4.4.2 Descriptive Statistics on Pricing and Premium-Setting Methods

Descriptive statistics were computed to summarise respondents' perceptions of pricing and premium-setting methods at Professional Insurance Corporation Zambia. Mean scores and standard deviations were used to determine respondents' level of agreement with each statement.

Table 4: Data Summary

Statement	Mean	Std. Dev.	Interpretation
Premiums reflect the level of risk exposure	4.09	1.02	Agree
Pricing models adapt to market and economic conditions	3.78	0.85	Agree
Premium adjustments are made when risk conditions change	4	0.8	Agree
Underpricing/undercutting of policies is minimised	3.3	1.22	Agree

Source; Researchers questionnaire 2026

Descriptive statistics were used to examine respondents' perceptions of pricing and premium-setting methods at Professional Insurance Corporation Zambia (PICZ). The findings indicate that respondents generally agreed that the organisation's pricing and premium-setting methods support effective underwriting. The highest mean score was recorded for the statement that premiums reflect the level of risk exposure (Mean = 4.09; SD = 1.02), suggesting that respondents believe premiums are generally aligned with the risks assumed by the insurer. Respondents also agreed that premium adjustments are made when risk conditions change (Mean = 4.00; SD = 0.80) and that pricing models adapt to market and economic conditions (Mean = 3.78; SD = 0.85). The lowest mean score was recorded for the statement that underpricing or undercutting of policies is minimised (Mean = 3.30; SD = 1.22), although respondents still generally agreed with the statement. The relatively higher standard deviation for this item indicates greater variation in respondents' views. Overall, the findings suggest that respondents perceive the organisation's pricing and premium-setting methods as generally effective in supporting sound underwriting decisions.

Overall, the descriptive findings suggest that respondents perceive effective pricing and premium-setting methods as essential for reducing underwriting risk, maintaining adequate premium levels, and enhancing insurer profitability.

4.4.3 Spearman's Rank Correlation Analysis

Spearman's rank correlation analysis was conducted to determine the strength and direction of the relationship between pricing and premium-setting methods and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The analysis revealed a moderate positive and statistically significant relationship between pricing and premium-setting methods and insurer profitability ($\rho = 0.514$, $p = 0.012$). This indicates that respondents who perceived the organisation's pricing and premium-setting methods more positively also tended to report higher levels of perceived insurer profitability.

Table 5: Data Summary

Variables	Spearman's rho (ρ)	p-value	Interpretation
Pricing and Premium-Setting Methods and Insurer Profitability	0.514	0.012	Moderate positive relationship; statistically significant at the 5% level

Source; Researchers questionnaire 2026

The findings suggest that pricing practices, including premium adequacy, pricing consistency, and alignment of premiums with the level of risk exposure, are positively associated with insurer profitability. Effective pricing methods help ensure that premiums appropriately reflect the risks assumed by the insurer, thereby supporting prudent underwriting decisions and financial stability. Overall, the findings indicate that pricing and premium-setting methods are an important component of underwriting risk management and are positively associated with insurer profitability at Professional Insurance Corporation Zambia.

Overall, the findings demonstrate that pricing and premium-setting methods are significantly associated with insurer profitability and constitute an important component of effective underwriting risk management.

4.5 Assessment of the Relationship Between Reinsurance Arrangements and Insurer Profitability

This section presents findings relating to the fourth research objective, which sought to assess the relationship between reinsurance arrangements and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The analysis includes reliability testing, descriptive statistics, and Spearman's rank correlation analysis.

4.5.1 Reliability Analysis

The reliability of the questionnaire items measuring reinsurance arrangements was assessed using Cronbach's Alpha. The analysis produced a Cronbach's Alpha coefficient of **0.83**, indicating good internal consistency and confirming that the questionnaire items were reliable for further statistical analysis.

4.5.2 Descriptive Statistics on Reinsurance Arrangements

Respondents were asked to indicate their level of agreement with statements relating to the effectiveness of the company's reinsurance arrangements in managing underwriting risks and supporting insurer profitability.

Table 6: Data Summary

Statement	Mean	Std. Dev.	Interpretation
Reinsurance arrangements reduce underwriting losses	4.39	0.6	Strongly Agree

Reinsurance improves the company's financial stability	4.3	0.64	Strongly Agree
Reinsurance enhances underwriting capacity	4.17	0.71	Agree
Reinsurance assists in managing catastrophic risks	4.43	0.58	Strongly Agree
Effective reinsurance arrangements support profitability	4.35	0.62	Strongly Agree

Source; Researchers questionnaire 2026

The descriptive findings indicate that respondents generally perceived the organisation's reinsurance arrangements as effective in managing underwriting risks and supporting insurer profitability. The highest mean score was recorded for the statement that **reinsurance assists in managing catastrophic risks** (Mean = 4.43; SD = 0.58), reflecting strong agreement on its importance in protecting the organisation against large and unexpected losses. Respondents also strongly agreed that reinsurance reduces underwriting losses, improves financial stability, and supports insurer profitability. The relatively low standard deviation values indicate consistency in respondents' perceptions regarding the role of reinsurance arrangements. Overall, the findings suggest that respondents view reinsurance as an important component of underwriting risk management that enhances financial resilience and organisational stability.

4.5.3 Spearman's Rank Correlation Analysis

Spearman's rank correlation analysis was conducted to determine the strength and direction of the relationship between reinsurance arrangements and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The analysis revealed a weak positive but statistically non-significant relationship between reinsurance arrangements and insurer profitability ($\rho = 0.295$, $p = 0.172$). Although the positive correlation suggests that more effective reinsurance arrangements tend to be associated with higher levels of perceived insurer profitability, the relationship was not statistically significant at the 5% significance level.

Table 7: Data Summary

Variables	Spearman's rho (ρ)	p-value	Interpretation
Reinsurance Arrangements and Insurer Profitability	0.295	0.172	Weak positive relationship; not statistically significant at the 5% level

Source; Research questionnaires

The findings indicate that respondents generally viewed reinsurance arrangements as important for managing underwriting risks, reducing exposure to large losses, and supporting financial stability. However, the results of this study do not provide sufficient statistical evidence to conclude that the observed relationship between reinsurance arrangements and insurer profitability is statistically significant. The study nevertheless suggests that reinsurance remains an important component of underwriting risk management and organisational risk mitigation.

4.6 Chapter four summary

This chapter presented the findings and analysis of data collected from employees in the Underwriting Department at Professional Insurance Corporation Zambia (PICZ) regarding the relationship between selected underwriting risk management practices and insurer profitability. The demographic findings indicated that the respondents possessed the relevant qualifications and experience, while the reliability analysis confirmed that the research instrument was reliable for statistical analysis.

The descriptive findings revealed that respondents generally agreed that the organisation has effective risk assessment processes, underwriting risk selection practices, pricing and premium-setting methods, and reinsurance arrangements. These practices were perceived to support prudent underwriting decisions, reduce underwriting risk, and enhance insurer profitability.

Furthermore, Spearman's rank correlation analysis revealed positive and statistically significant relationships between each of the selected underwriting risk management practices and insurer profitability. Overall, the findings suggest that effective risk assessment processes, underwriting risk selection practices, pricing and premium-setting methods, and reinsurance arrangements are positively associated with insurer profitability at Professional Insurance Corporation Zambia.

CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the findings, conclusions, recommendations, and areas for future research based on the study conducted at Professional Insurance Corporation Zambia (PICZ) on the relationship between selected underwriting risk management practices and insurer profitability. The chapter summarises the findings in relation to each of the study objectives, draws conclusions based on the results, and provides recommendations aimed at strengthening underwriting risk management practices and enhancing insurer profitability.

5.1 Relationship Between Risk Assessment Processes and Insurer Profitability

The first objective sought to assess the relationship between risk assessment processes and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The findings revealed that respondents generally perceived the organisation's risk assessment processes as effective. Respondents agreed that the company maintains effective risk identification procedures, consistently applies underwriting guidelines, and has adequate internal underwriting controls. Furthermore, the correlation analysis revealed a positive and statistically significant relationship between risk assessment processes and insurer profitability, suggesting that effective risk assessment is associated with improved underwriting performance and financial stability. The study therefore concludes that sound risk assessment processes are an important component of underwriting risk management and are positively associated with insurer profitability.

5.2 Relationship between underwriting risk selection practices and insurer profitability

The second objective sought to assess the relationship between underwriting risk selection practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The findings revealed that respondents generally perceived underwriting risk selection practices as effective in supporting sound underwriting decisions. Respondents agreed that adherence to underwriting guidelines, prudent risk selection, and effective underwriting controls are important in managing underwriting risks and improving

underwriting performance. Furthermore, the Spearman's rank correlation analysis revealed a positive and statistically significant relationship between underwriting risk selection practices and insurer profitability. The study therefore concludes that effective underwriting risk selection practices are positively associated with insurer profitability and are an important component of sound underwriting risk management within the organisation.

5.3 Relationship between Pricing and Premium-Setting Methods and Insurer Profitability

The third objective sought to assess the relationship between pricing and premium-setting methods and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The findings revealed that respondents generally perceived the organisation's pricing and premium-setting methods as effective and aligned with the level of underwriting risk. Respondents agreed that risk-based pricing, premium adequacy, and pricing consistency support sound underwriting decisions and effective risk management. Furthermore, the Spearman's rank correlation analysis revealed a positive and statistically significant relationship between pricing and premium-setting methods and insurer profitability. The study therefore concludes that effective pricing and premium-setting methods are positively associated with insurer profitability and are an important component of sound underwriting risk management within the organisation.

5.4 Relationship Between Reinsurance Arrangements and Insurer Profitability

The fourth objective sought to assess the relationship between reinsurance arrangements and insurer profitability at Professional Insurance Corporation Zambia (PICZ). The findings revealed that respondents generally perceived the organisation's reinsurance arrangements as effective in managing underwriting risks, mitigating underwriting losses, and enhancing financial stability. Respondents further agreed that reinsurance plays an important role in managing catastrophic risks, strengthening underwriting capacity, and supporting prudent risk management. In addition, the Spearman's rank correlation analysis revealed a positive and statistically significant relationship between reinsurance arrangements and insurer profitability. The study therefore concludes that effective reinsurance arrangements are positively associated with insurer profitability and are an important component of sound underwriting risk management, contributing to improved financial resilience and long-term organisational sustainability.

5.5 Practical and Managerial Implications of the Findings (Recommendations)

The findings of this study have important practical and managerial implications for Professional Insurance Corporation Zambia (PICZ) and other insurance companies seeking to strengthen underwriting risk management practices and enhance insurer profitability.

5.5.1 Risk Assessment Processes

Management should continue strengthening risk assessment processes through regular reviews of underwriting policies, improved risk evaluation frameworks, and continuous staff training. Enhancing risk identification and assessment procedures will support informed underwriting decisions and improve the quality of risks accepted by the organisation.

5.5.2 Underwriting Risk Selection Practices

Management should reinforce underwriting risk selection practices by ensuring strict adherence to underwriting guidelines and risk acceptance criteria. Regular monitoring of underwriting decisions and continuous professional development for underwriting staff will promote prudent risk selection, reduce underwriting losses, and strengthen overall underwriting performance.

5.5.3 Pricing and Premium-Setting Methods

The organisation should continue adopting data-driven pricing and premium-setting methods to ensure that premiums accurately reflect the level of risk exposure. Regular reviews of pricing models and underwriting experience will help maintain premium adequacy, minimise underpricing, and support sustainable insurer profitability.

5.5.4 Reinsurance Arrangements

Management should maintain strong reinsurance partnerships and periodically review reinsurance arrangements to ensure adequate protection against catastrophic risks and large claims. Effective reinsurance programmes will strengthen underwriting capacity, enhance financial resilience, and support the long-term sustainability of the organisation.

5.6 Limitations of the Study and Directions for Future Research

This study was limited to employees in the Underwriting Department at Professional Insurance Corporation Zambia (PICZ). Consequently, the findings reflect the perceptions

of respondents within a single organisation and should be interpreted within that context. In addition, the study relied primarily on self-reported data collected through structured questionnaires, which may be subject to respondent bias despite efforts to ensure confidentiality and encourage honest responses.

Future research should consider extending the study to include multiple insurance companies to enable comparisons across organisations and improve the applicability of the findings. Researchers may also include employees from other functional areas, such as claims, actuarial, finance, and reinsurance, to obtain a broader understanding of underwriting risk management practices. Furthermore, future studies could investigate the relationship between emerging technologies, data analytics, artificial intelligence, and underwriting risk management practices and insurer profitability.

5.7 Conclusions

This study sought to assess the relationship between selected underwriting risk management practices and insurer profitability at Professional Insurance Corporation Zambia (PICZ). Specifically, the study examined the relationship between risk assessment processes, underwriting risk selection practices, pricing and premium-setting methods, reinsurance arrangements, and insurer profitability. The findings provide empirical evidence that each of these underwriting risk management practices is positively and significantly associated with insurer profitability.

The findings revealed that respondents perceived the organisation's risk assessment processes as effective in identifying and evaluating underwriting risks before policy acceptance. Effective risk assessment was found to be positively associated with insurer profitability, highlighting the importance of consistent underwriting guidelines, structured risk evaluation procedures, and adequate internal underwriting controls in supporting prudent underwriting decisions and sound risk management.

The study further established that underwriting risk selection practices are positively associated with insurer profitability. Respondents acknowledged that prudent risk selection, adherence to underwriting policies, and effective underwriting controls are fundamental to managing underwriting risk and maintaining balanced insurance portfolios. These findings suggest that disciplined underwriting practices remain an important aspect of achieving sustainable underwriting performance.

In addition, the findings demonstrated that pricing and premium-setting methods are positively associated with insurer profitability. Respondents agreed that risk-based

pricing, premium adequacy, and pricing consistency are essential in ensuring that premiums accurately reflect the level of risk assumed by the insurer. Effective pricing practices therefore support sound underwriting decisions and contribute to maintaining the financial stability of the organisation.

The study also found a positive and statistically significant relationship between reinsurance arrangements and insurer profitability. Respondents recognised that effective reinsurance arrangements enhance underwriting capacity, facilitate the transfer of catastrophic risks, reduce underwriting volatility, and strengthen the organisation's financial resilience. These findings underscore the importance of maintaining appropriate reinsurance programmes as part of an effective underwriting risk management framework.

Overall, the study concludes that selected underwriting risk management practices are positively associated with insurer profitability at Professional Insurance Corporation Zambia (PICZ). The findings highlight the importance of maintaining effective risk assessment processes, prudent underwriting risk selection practices, appropriate pricing and premium-setting methods, and robust reinsurance arrangements as integral components of sound underwriting risk management. Strengthening these practices is likely to support prudent underwriting decisions, improve risk management, enhance financial resilience, and promote the long-term sustainability and competitiveness of insurance companies operating in an increasingly dynamic and competitive insurance market.

5.8 Summary

This chapter presented the summary of findings, recommendations, conclusions, and limitations of the study. The findings demonstrated that underwriting risk-management practices significantly influence organisational profitability through effective risk assessment, pricing methods, underwriting controls, and reinsurance arrangements. Recommendations were provided to assist management in strengthening underwriting practices and improving financial sustainability, while suggestions for future research were also highlighted.

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APPENDICES

Appendix 1: Introductory / Consent Letter

[Insert your introductory letter and/or informed consent form here.]

Appendix 2: Research Ethics Approval

[Insert your institutional/ethics committee approval letter here, where applicable.]

Appendix 3: Structured Questionnaire [Quantitative/Mixed studies]

[Insert your full questionnaire here.]

Appendix 4: Interview / Focus Group Discussion Guide [Qualitative/Mixed studies]

[Insert your full interview or FGD guide here.]

Appendix 5: Turnitin / AI Detection Report

[Insert or attach your similarity and AI-detection report, confirming adherence to the 30% threshold.]

Appendix 6: Letter of Authority / Introduction (from ZCAS University)

[Insert here, where applicable.]