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Macroeconomic-Specific Determinants of Insurers Solvency in Developing Economies

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Abstract: The paper examines the macroeconomic factors and requirements that influence insurance solvency in Zimbabwe. It aims to develop a conceptual framework for policymakers to analyse economic conditions and establish an effective risk-based capital system. This framework intends to motivate insurers to reduce insolvency risks, support the rehabilitation of weaker insurers, and facilitate the orderly exit of unsuccessful firms from the market. Using content analysis and a framework approach, the study identifies patterns and contexts related to insurers' solvency in Zimbabwe. The study utilised data from secondary sources, including reports from seventeen non-life insurance companies covering the period from 2017 to 2022, sourced from the Insurance and Pensions Commission in Zimbabwe. The analysis reveals that liquidity risks, liquid assets, capital, balance sheets, shareholders' funds, gross domestic product, interest rates, inflation, and governance all play essential roles in determining insurer solvency in developing nations, such as Zimbabwe. However, a poorly designed system may encourage excessive risk-taking by insurers, impose unnecessary costs on policyholders and financially stable insurers, and reduce overall market capacity. To prevent these issues, any proposed risk-based capital system should be thoroughly tested before implementation to ensure it functions effectively, particularly in areas with a high proportion of past insolvencies. Therefore, a robust regulatory framework for insurance companies in developing nations will help manage solvency levels, aiming to reduce the insolvency of short-term insurers and generate sufficient revenue to cover their expenses.

Keywords: economic performance; risk; capital; investment; governance

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1. Introduction

Solvency is defined as the capability of an insurance firm to cover its liabilities as well as any debt obligations without using any of its existing reserves (Grdić, Nižić & Mamula, 2017). In essence, the author defines solvency in terms of insurers' fiduciary duty, or the possibility that the insurance company will be capable of keeping its commitments by paying obligations when they become due. Solvency is also defined by Daykin et al. (1987) as the possession of assets that outweigh obligations, indicating the insurer's potential ability to pay off its debts when they become due. Hence, having sufficient liquidity indicates that an insurer is solvent. Mirza et al. (2023) state that the structure of capital is based on the distinction of senior obligations of a firm from the junior ones, hence the definition that solvency is the capability of a firm to pay off its senior obligations. A contradictory view states that solvency theory is primarily focused on financial solvency, which may not always reflect the overall health and sustainability of an insurer. A company may be financially solvent but still face operational challenges or reputational issues that could threaten its long-term viability (Hsiao & Whang, 2009).

In contrast, insolvency is defined as a circumstance where a company doesn't fulfil its debt obligations to parties that it owes and is thought to be the primary cause of most organisational downfalls (Buccola, 2013). In other words, the author states that it is possible to define financial insolvency as a state of being in dire financial straits that could result in bankruptcy (Isayas, 2021) whilst according to Cook and Sabbagh (2022), insolvency is defined as the failure of a person, a company, or a nation to fulfil its financial commitments to lenders. The author further explains that both balance sheet insolvency and cash flow insolvency are types of insolvency. The former happens when an entity has total obligations that are worth more than all of its assets combined. It is then essential to identify insurance companies that are heading towards financial insolvency, such that regulatory boards may chip in as fast as possible and avoid the systematic failure of the financial system. The solvency theory, however, has a weakness in that it addresses only the symptoms of insolvency rather than its root causes (Zhang & Nielson, 2015). It emphasises capital adequacy and risk management but may not necessarily address the underlying factors that contribute to insolvency, such as poor investment decisions, inadequate underwriting processes, or fraudulent activities (Boonen, 2017). This implies that further research is required in order to improve the strength of the theory.

There are different criteria used in solvency measurement, and the most and mainly applied, as supported by empirical evidence, are the accounting solvency ratios, the z-score and the regulatory solvency ratios. Insolvency prediction based on firm-

specific traits and financial parameters was a major focus of earlier work in solvency surveillance (Aluko & Makumbe, 2024). These extensive investigations of insolvency prediction in insurance have generated many insolvency prediction models and found key firm-level characteristics that are crucial for predicting the possibility of insolvency (Barua et al., 2018; Zhang & Nielson, 2015). While the solvency theory provides a useful framework for maintaining solvency management and reducing insolvency for non-life insurance companies in Zimbabwe, it should be seen as a complementary approach rather than a comprehensive solution. To effectively address insolvency risks, insurers need to adopt a more holistic and proactive approach that includes macroeconomic risk identification, assessment, and management across all aspects of their operations. The long-term growth of the Zimbabwean insurance sector is adversely affected by macroeconomic challenges and its environment, which, as a result, has contributed to the solvency risk of insurance companies over the years. As a result of these challenges and the importance of integrating existing solvency management guidelines and initiatives, the Zimbabwean regulator is putting in place the process of revising the solvency framework to include macroeconomic capital structure that will contribute to the financial stability of insurers and safeguard policyholders. Therefore, identifying the macroeconomic determinants of insolvency for non-life insurance companies is necessary and important to address the knowledge gap among various stakeholders of the sector in Zimbabwe.

1.1. Solvency Regulation

The main cause of the insurance sector's instability is insolvency, hence the need for solvency macroeconomic management by use of frameworks that are specially designed to maintain financial stability (IPEC, 2018). Solvency regulation fuels the increase in underwriting results volatility. Further resulting from a study conducted across Canadian insurers postulates that, if solvency regulation and financial reporting are considered in a holistic approach, there is room for insurance companies can be compared fairly, allowing regulators and insurance clients to understand the possible risks associated with their insurance companies, allowing for in-depth research on insolvency (Grishunin et al., 2021). The business's capability to satisfy medium- and long-term maturities, especially using its financial assets, is shown by its level of solvency. The main goal of a business owner who seeks to preserve their financial independence and autonomy as managers is solvency, which results from a healthy cash flow (an equilibrium among cash inflow and outflow) as well as surplus of working capital. This implies a better fit among requirements for a long-term investment in real and financial holdings, such as equity and long-term debt (Chen et al., 2021).

The objectives of solvency regulation is controlling the conduct of involved parties, protecting consumers from unfair financial activities, ensuring the financial soundness of insurance companies and establishing a strong economic and financial system. The importance of solvency regulation is to protect policyholders from incurring losses as a result of financial insolvency. Regulation, investment by insurers, as well as a continuous change in market conditions, trigger ongoing improvements of classification models to provide models that are up to date. In Zimbabwe, for instance, an insurance company that violates regulatory requirements will face statutory penalties in accordance with its failure to comply (IPEC, 2019). The Commission has since been developing a framework for risk-based capital (ZICARP) to calculate the amount of capital insurers should have in relation to the risks they insure, with the help of African Actuarial Consultants (AAC) for technical assistance in creating the framework. Three pillars make up the Framework: Pillar 1: Quantitative determination of solvency capital; Pillar 2: Own Risk Assessments; and Pillar 3: Disclosure Requirements, which was expected to be implemented in 2020 (IPEC, 2019). However, according to IPEC (2020) ZICARP is yet to be implemented, and insurance companies are being advised to be prepared for its implementation in 2023.

The sudden deterioration of financial strength resulting from the COVID-19 pandemic created very harsh problems relating to business solvency and liquidity, which was a trigger for sponsors and regulators' intervention to improve financial soundness that had been disturbed (Mirza et al., 2023). The author further postulates that the study mainly looked at short-term management of liquidity and did not look at the possibilities of long-term solvency challenges that are likely to emerge. Therefore, in the new economy characterized by "knowledge," the players such as agencies, stakeholders, investors, financial institutions and regulators are seeking ways to assess, evaluate, and report asset performance and knowledge in the form of insurer operation sustainability (Chiaramonte et al., 2020; Risi, 2020). This reporting approach could be facilitated by the adoption of a variable macroeconomic framework in developing economies. This will consist of a detailed discussion on the concept of solvency with an explanation of how it is measured, as well as discussing how important it is. The following is a review of theoretical literature and empirical literature on macroeconomic factors that determine insurers' insolvency. Empirical literature analyses the studies already conducted by several researchers to pinpoint areas that require further research. The factors affecting a company's solvency can be explained using a variety of theoretical frameworks. For this study, the agency theory is fundamental.

2. Theoretical Framework

The risk-sharing issue can be seen when the parties involved view risk differently. The agency dilemma, which arises from two parties who have distinct views and divisions of labour, was introduced into this literature on risk sharing through the use of agency theory by Eisenhardt and Eisenhardt (2018) which explains the Jensen Meckling model of 1976. The agency theory aims to describe the actions of different agents, such as stockholders, debt holders, and managers, who are involved in the funding of the company. Hence, since the shareholders have delegated decision-making authority to the management, which serves as a principal, the manager is required to act according to the expectations of the company's investors as well as shareholders (Varela, 2017).

The theory assumes that the agent understands more of the business environment than the principal, and the principal focuses more on getting a higher return. This, however, contradicts the decisions of the agent, especially when the company is not performing well and there is a need to reduce the benefits of shareholders (principal) (Jia et al., 2011). It suggests that rivals may arise between shareholders and agents (management) in a company due to misaligned interests, information asymmetry, and other factors. However, agency theory has some relevance in understanding the determinants of insolvency, but it is not the only factor at play (Eisenhardt & Eisenhardt, 2018).

Connection, whereby one party assigns work to another party who completes it, is the aim of agency theory. The theory uses the metaphor of a contract to attempt to explain the relationship (Eisenhardt & Eisenhardt, 2018). In addition, the theory assumes that managers frequently issue debt in place of stock and bind themselves to pay out future cash flow to further their interests. Debt lowers agency costs related to free cash flow by restraining the flow for consumption at management's discretion. Under such agreements, manager undertakes to pay the principal plus interest to the debt holder; if they fail to do so, the firm is placed in bankruptcy court. Debt is described as a factor that determines a company's financial mix (Jia et al., 2011).

One of the main determinants of insolvency for short-term insurers is the regulatory environment. The Insurance and Pensions Commission (IPEC) in Zimbabwe is responsible for ensuring that insurers comply with licensing requirements, solvency ratios, and other regulations. Non-compliance with IPEC regulations can result in fines, sanctions, and even revocation of the company's license (IPEC, 2023). Therefore, the agency theory perspective that managers may prioritise their interests over those of shareholders is mitigated by the regulatory oversight of IPEC.

The non-life insurance market in Zimbabwe is highly competitive, with many players vying for market share. This competition results in price wars, which lead

some companies to underprice their policies to remain competitive (IPEC, 2020). This is a risk for insolvency since income from premiums may not cover claims, payment and administrative expenses. In this case, it is not necessarily a conflict between shareholders and managers, but rather a response to external market pressures.

The concept states that there is always asymmetric information because the principal's interests are mostly predominant, leading to effects on the leverage level through the issue of debt. The capital structure is inversely related to solvency, hence, the theory supports the firm-specific characteristics that influence solvency (Varela, 2017). The author further states that information must be considered a commodity in agency theory since it builds the relationship between principal and agent. Overall, agency theory provides some insight into the determinants of insolvency for short-term insurers in Zimbabwe, but it is not a comprehensive framework. Other factors, such as regulatory oversight, competitive pressures, and macroeconomic conditions, also play a significant role and cannot be ignored in understanding insolvency risk.

3. Empirical Review

Literature is averse to research on the factors determining insurers' ability to remain viable due to the rising number of insolvent insurers (Barua et al., 2018). In relation to solvency, liquidity is considered short-term in nature, whilst solvency is long-term. This is according to Rahayu Ningsih et al. (2021), who further define liquidity as the insurer's state of being able to access liquid assets, which include cash in the bank and cash in hand to pay off its current obligations. Determinants of insolvency for insurance companies in the UAE are mainly underwriting risk, liquidity and profitability, similar to a study on Kenyan short-term insurers that found underwriting, investment and liquidity risk as the main predictors of insolvency in Kenya (Kamau, 2023; Ngunguni et al., 2020). A further investigation found investment income, liquidity, and claims ratio as the main predictors of solvency for insurers. In addition, investment income, underwriting risk and market competition pose a strong impact on short-term insurance companies in Taiwan (Wu & Deng, 2021). Additionally, according to the study conducted by Isayas (2021) using data from 2007 to 2016, the Ethiopian insurance industry's financial instability and its determinants were also evaluated, discovering that the study of the insurers' financial soundness was not secure and that it exhibits continuous fluctuations.

Hanewald et al. (2011), in their study to assess the overall impact of macroeconomic fluctuations on a life insurer's solvency and the financial stability of a life insurance company, it was found that GDP is the fundamental link between the number of surviving insureds and capital market returns. Ambaw and LiJuan (2021) assessed

the factors affecting the profitability of non-life insurance based on a sample of 17 insurance companies in Ethiopia from 2005 to 2020. The study used a combination of internal and external variables of capital adequacy, liquidity, loss ratio, premium boost, GDP, and asset inflation. The author's findings showed that the profitability of insurance companies was defined by liquidity and inflation. The loss ratio, liquidity and GDP correlated positively with returns on assets (ROA), while ROA correlated negatively with capital adequacy, premiums, and inflation. In addition, Lee (2014) embarked on a similar study and found economic growth rate has a significant influence on the profitability of insurance companies in the operating ratio model, but an insignificant influence on profitability in the ROA model. The results of Killins (2020), Banerjee and Majumdar (2018), and Gatsi and Gadzo (2013) show that the macroeconomic factors of GDP growth, inflation and exchange rate has a significant positive influence on profitability of insurance companies in Canada, UAE and Ghana, respectively. The connection between GDP and solvency has been researched heavily in both developed and developing insurance markets. Further, in a market like Russia, GDP has been found to have a positive impact on insurers' insolvency, as it can increase demand for insurance products both within the country and globally, giving it leverage to charge higher premiums (Grishunin et al., 2021). A study on the factors determining insolvency for insurers in the UK shows that a similar trend is seen in developed insurance environments (Caporale et al., 2017). In contrast, developing markets like Ethiopia show that the relationship between GDP and solvency is less clear since the penetration rates of insurance are lower, and regulatory frameworks are not as tight (Ambaw & LiJuan, 2021).

Using a dynamic panel data model to understand solvency margins during an economic crisis, Moreno et al. (2020) found that the actual solvency margins are positively related to profitability, but with less concentrated markets. In Malaysia, Santomil et al. (2018) embarked on a similar study on non-life insurance companies, and in China Wu and Deng (2021) found premium growth rate, investment risk and expense ratio as significant predictors of solvency. In contrast, Ehiogu and Duruechi (2021) study revealed a moderate conclusion that the inflation rate did not significantly impact the non-life insurance sector's total premiums, claims, and assets in Nigeria.

Jawad and Ayyash (2019) conducted research looking at insolvency of insurers in Palestine with the use of data covering seven firms in Palestine between 2010 and 2017 resulting in the conclusion that macro-economic factors like foreign direct investments, insurance penetration, interest rates, real exchange rates and inflation are very important in the assessment of the insurers' solvency. Similarly, a study conducted by Caporale et al. (2017), looking at 515 UK firms for thirty years, has results that are consistent with those found by Jawad and Ayyash (2019).

This research shows that high inflation rates have been identified as a major determinant of insolvency for non-life insurance companies in Zimbabwe, as evidenced by First Mutual Reinsurance Company, which reported that inflation had contributed most to the decline in its profitability in 2019, leading to a net loss of ZWL 3.8 million (IPEC, 2019). The report further details that inflation erodes the value of premiums collected by insurers while the claims expenses increase in nominal terms. For example, the COVID-19 era impacted the insurance sector as insurers have had to deal with increased claims and reduced business activities. Economic challenges arose, and the Zimbabwean economy has faced several challenges, including high inflation, foreign currency shortages and low economic growth. Insurers have struggled to maintain their financial stability and profitability due to those challenges.

Reinsurance utilisation and actuarial issues negatively affect insurance companies' solvency, according to study results (Rubio-Misas & Fernández-Moreno, 2017). However, studies from Grdić, Nižić and Mamula (2017) show that the two variables impact solvency margin positively but insignificantly, whereas research from Caporale et al. (2017) suggest on reinsurance and actuarial issues having a significant positive impact on the solvency margin, while Wu and Deng (2021) does not get a significant relation among reinsurance, actuarial issues and solvency margin in a study that focused on financial solvency for life insurers targeting companies in Taiwan. Several macroeconomic variables have been identified as significant predictors of insolvency for insurance companies, which include economic growth, inflation rate, and exchange rate (Bakoush et al., 2022). Investigations into the relationship between firm-specific determinants and macroeconomic variables of insurers' solvency have been conducted by many. For instance, a strong correlation between underwriting risk and economic growth on the insolvency of non-life insurers has been found in a study by (Grdić et al., 2017).

Caporale et al. (2017) further identify two more macroeconomic variables which are namely, wholesale price and credit provided by financial insurers, as another crucial aspect in the assessment of general insurers solvency levels. In 2019, for example, the IPEC report, Nicoz Diamond Insurance Limited, experienced a decline in premium income resulting from economic recession, which contributed to a loss of ZWL 9.8 million. To add on, insurance companies to settle reinsurance claims and purchase foreign currency denominated assets, such as bonds and equities they require foreign currency. Zimbabwe has been experiencing foreign currency shortages, which have drastically affected non-life insurance companies, leading to insolvency risk (IPEC, 2020). The report shows that Zimnat General Insurance Company Limited failed to settle foreign currency denominated claims due to foreign currency shortages, which contributed to a loss of ZWL 13.5 million. The same company reported a net loss of ZWL 2.5 million that resulted from poor investment performance (IPEC, 2019).

Research on the relationship between investment performance and solvency yielded mixed results. A study on the Chinese insurance market, which is a developed market, found that investment performance had a significant positive impact on solvency ratios, suggesting that better investment returns can help improve a company's solvency position (Wu & Deng, 2021). Also, research on the Ethiopian insurance market has revealed a positive link between the two (Isayas, 2021).

While other studies found a positive relationship between profitability and solvency, suggesting that more profitable insurers in Croatia are solvent (Grdić et al., 2017). Other studies have found no significant relationship between the two variables (Boyjoo & Ramesh, 2017). Moreover, other studies have even suggested that profitability has a negative impact on solvency, as more profitable companies are more inclined to take risky investments or underprice their policies (Ambaw & LiJuan, 2021). Isayas (2021) found a positive relationship between solvency and liquidity in a study conducted on the Ethiopian market. The results have been consistent among different authors, resulting in Wu and Deng (2021) in a study of the Chinese markets, a direct link between liquidity and solvency was found. The findings have suggested that companies in both developed and developing countries with higher levels of liquidity have a higher solvency level. This results from the capability of insurers to counter shortcomings, which is significant and prevents insolvency. In a study on Hong Kong and the Ethiopian insurance markets by Isayas (2021), the former found that larger insurance firms are highly solvent as they have greater resources and are in a better position to diversify their risks, whereas the latter, on the other hand, found that there was an optimal size for insurance companies beyond which further growth may increase their risk of insolvency.

The empirical literature suggests that effective management of proper solvency levels requires a combination of factors, including adequate capital levels, effective risk management, sound investment strategies, appropriate underwriting practices, strong corporate governance, asset quality, profitability and liquidity. A strong regulatory framework also helps in the management of solvency levels in a bid to reduce the insolvency of short-term insurers in Zimbabwe. The link between internal and external factors has been found to be positively related in both developed and developing countries, except for GDP, which is stated to be less clear due to poor penetration of insurance in those markets.

4. Methodology

The methodology involves the use of content analysis to ascertain the patterns and context of insurers' solvency in Zimbabwe. This analytical content analysis was undertaken to give some insight into the determinant factors of solvency for short-term insurers and to reduce insolvency for non-life insurance companies in

Zimbabwe. Therefore, the study used raw data from secondary sources, specifically annual financial statement reports from seventeen non-life insurance companies, covering the period from 2017 to 2022. These reports were obtained from the Insurance and Pensions Commission in Zimbabwe (IPEC), a regulatory body responsible for overseeing Zimbabwean insurers. The non-life insurance firms selected are all registered and regulated by IPEC. The seventeen insurance firms were chosen based on the criterion that they have been operating and reporting for at least five years. Studying this period is justified by the need to examine solvency determinants during a time when all insurance companies reported their financial accounts in ZWL terms, following the introduction of dollarisation. This helps to minimise issues related to currency variation across different periods. This approach is to complement rather than a comprehensive solution related to identified economic-based framework content categories and to provide incentives for insurers to reduce insolvency risk, to facilitate the rehabilitation of weak insurers, and to bring about the orderly exit of unsuccessful companies from the market.

5. Analysis

The main objective of this study is to understand the determinants of macroeconomic-specific factors for insurer solvency in Zimbabwe. The government, policymakers, investors, and other stakeholders expect much more information on insurer solvency than what is currently being provided by the IPEC of Zimbabwe. The idea is to understand the significance of the regulatory requirements and how these influence the performance of insurers and their solvency level on issues related to growth, sustainability and generally acceptable guidelines, principles or standards on which insurer operations are based such disclosures can be based on the prepared requirements and guidelines of IPEC, which are free to exercise their discretion about the level of disclosures on insurer solvency. Generally, the disclosures in the IPEC requirements and guidelines are categorised into three pillars that make up the framework, which are to be implemented by insurance companies and are advised to be prepared for 2023.

Most times, the “facts behind the figures” are adequately explained by the information contained in the discretionary pillars of IPEC, thereby serving a complementary role to the information provided in the guidelines and providing for a more comprehensive report. However, given that no generally acceptable standard could afford the preparers of IPEC the opportunity to provide more comprehensive information on insurer solvency, this gap could be filled through the expansion of the macroeconomic variables to complement a comprehensive framework for IPEC on insurer solvency in Zimbabwe.

This study provided an insolvency framework which includes a range of macroeconomic-based functionality variables that may be included in IPEC. Although the items in the framework are by no means exhaustive, they nevertheless could be regarded as a foundation for more comprehensive macroeconomic determinants factors for insurer insolvency.

Table 1. Macro-economic-based variable determinants of insolvency framework

Functional Areas	Indicators	Objectives	Approach
Liquidity risks	Cash flow mismatches and market liquidity	To ensure sufficient liquid assets to meet immediate obligations and prevent forced sales of assets in distressed markets	Stress testing under different scenarios and ensuring alignment of cash inflows and outflows
Liquid assets	Cash equivalents and high-quality liquid assets	To maintain a buffer for unexpected liabilities and operational needs	Ensuring regulatory liquidity thresholds and investing in highly liquid instruments
Capital	Regulatory capital requirements and risk-adjusted capital	To meet solvency and regulatory requirements and maintain stakeholder confidence	Conducting capital adequacy assessments and maintaining buffers above minimum regulatory levels
Balance sheet	Asset liability and quality matching	To achieve stability and resilience against market shocks	Continuous monitoring of asset-liability matching (ALM) and risk diversification strategies
Shareholders' funds	Equity and retained earnings	To provide a cushion for absorbing losses and supporting business growth	Maintaining adequate reserves and ensuring earnings retention for growth and solvency
Economic performance	Economic growth rates and recession risks	To assess the impact of economic cycles on business solvency and profitability	Analysing macroeconomic conditions and adjusting risk exposure and strategies accordingly
Interest rates	Level and trend of interest rates	To manage the impact of prolonged low or negative interest rates on solvency and profitability	Designing policies with adjustable guaranteed rates and introducing products with lower guarantees
Inflation	Consumer Price Index (CPI)	To account for the erosion of asset value and	Investing in inflation-linked securities and

Functional Areas	Indicators	Objectives	Approach
		increased liability from inflationary pressures	incorporating inflation adjustments into pricing
Governance	Risk management and internal controls practices	To ensure effective oversight and sound decision-making to minimise insolvency risks	Strengthening board oversight, compliance frameworks, and regular governance audits

The developed framework is grouped into nine functional activity areas: Liquidity risks, Liquid assets, Capital, Balance sheet, Shareholders' funds, Economic performance, Interest rates, Inflation and Governance. The functional listed areas encompass the indicators, objectivity and approach that provide details analytical pieces of information and how users can leverage the strategic applications on insurer insolvency. Thus, the vision of an insurance company is to record profitability and sustain its operations. The information provided also summarised the analysis of the framework. Therefore, the theoretical analysis of the framework also discusses and provides relevant information on the role of the macroeconomic determinants of insurer insolvency.

The liquidity risk theory suggests that non-life insurance companies are at risk of insolvency if they experience a shortage of cash or liquid assets. The theory is anchored on the belief that insolvency occurs where a firm is not able to counter its obligations. From a banking angle of view, liquidity risk is the borrower's risk of defaulting or failing to pay its debts (Swiss Re, 2020). The cycles of liquidity are directly linked to the business cycles, meaning that an underperforming economy will lead to downgrades and an increase in defaults. The likelihood that an insurer default depends on macroeconomic factors such as unemployment levels, interest rates, growth rate, cost of living, and the aggregated amount of savings, among others. Hence, the theory is described as the risk to the investor of financial loss, resulting from a debtor not paying their obligations according to the terms of the contract (Isayas, 2021).

The concept of liquid assets propounds that any time a firm's earnings or net cash flow is negative or beyond meeting debt obligations, there is a high probability of the company's failure (Daykin et al., 1987). Technical insolvency is the term for this circumstance. The quality of assets of non-life insurance companies have a huge role to play in the insurance industry. The increase in total assets by 12.8% as at 31 March 2017 had a significant impact on the Zimbabwean short-term insurance sector (IPEC, 2017). The research, Isayas (2021), expresses that the liquid asset theory utilises a cash flow to describe financial difficulty. It emanates from the idea that fundamental criteria to describe a firm's financial status have to be net cash flows in relation to current liabilities. With positive cash flow, insurers have the capability to obtain

funds from capital markets, whilst those with poor cash flows may have poor ratings and are not able to obtain funds easily, which poses default risk.

Therefore, while the liquidity risk theory is relevant to the Zimbabwean non-life insurance market, it is crucial to consider macroeconomic determinants of insolvency. The high inflation rates, unstable exchange rates, shortage of foreign currency, and political instability in Zimbabwe all impact the liquidity of non-life insurance companies and must be considered when evaluating the risk of insolvency in this market.

The solvency capital requirement, which is defined as a smart and more risk-sensitive approach to calculating solvency, has been created to counter risks across the whole balance sheet (Ningsih et al., 2021). The minimum capital requirement is the prescribed level to which insurers should maintain their capital, in order to curb unacceptable assumptions of risks to policyholders. In relation to the solvency capital requirement, it is usually the lower solvency capital calculation (Holzmüller, 2009) which takes value at risk into consideration at a 90 percent level of confidence for one year. On the other hand measures the minimum capital requirement as a portion of the solvency capital requirement, as approved by the regulator, giving a positive connection with the solvency capital requirement (IPEC, 2019). Also, shareholder funds are their funds as recorded on the balance sheet, constituting an excess of assets against liabilities, which are applied in scenarios where there is liquidation as a representation of capital. It can refer to ancillary funds that are recorded off the balance sheet and can be utilised by insurers to enhance their financial position (Ningsih et al., 2021).

Insurers and reinsurers are expected to have effective governance systems, including transparency on the sharing and separation of duties. The approach is based on the activities of the company's complexities and its environment, which additionally specifies the controls, internal auditing, as well as risk control rules (IPEC, 2017). A proper and strong governance structure will allow for the maintenance of required levels of solvency, thereby reducing the risk of insurance companies collapsing and failing to pay off claims when they fall due. Supervisory bodies carry out the supervisory review process, which involves examining risk management plans, capital needs report methods, technical provisions, investment guidelines, governance systems, and the amount of money owned. Additionally, the supervisory board takes charge in monitoring compliance and evaluating the insurance companies and reinsurance companies' practices to enable the detection of unfavourable outcomes that may jeopardise the firm's financial soundness in the near future (IPEC, 2019). In instances when the management structure fails to properly determine, evaluate, monitor, control, and disclose risks or if the assessment finds that the risk profiles of the insurer or reinsurer significantly deviate from the solvency capital requirements assumptions, a capital add-on may be necessary.

Internal control and audit are the first elements under risk management. The compliance department takes charge of analysing the legal landscape, providing legal guidance towards insurers, and guaranteeing adherence to rules and laws. Techniques for compliance, accounting, and reporting make up the internal controls. In contrast, internal audit entails assessing the suitability of controls and governance components to guarantee that scheduled activities go exactly as intended and suggesting action plans to the supervisory team or managers (Jawad & Ayyash, 2019). It is therefore important to outline standards for informing policyholders, investors, rating agencies, and other interested parties so they may have a full picture of the risk the insurance faces (Ambaw & LiJuan, 2021). The capital structure, risk management procedure, risk profile, capital adequacy, and risk management performance must all be disclosed. Investors have access to vital information regarding risk exposures, capital, and risk assessments resulting from the disclosure requirement. It is believed that if customers and investors learn about this, they will exert pressure on the insurer to perform better than it presently does (Aluko & Makumbe, 2024).

6. Conclusion and Recommendations

The Zimbabwean economy is characterised by high inflation rates, unstable exchange rates, and a shortage of foreign currency. These macroeconomic factors directly impact the liquidity risk of non-life insurers. For example, high inflation rates and unstable exchange rates result in increased operating costs for insurance companies. This can lead to liquidity problems if these companies are not able to generate sufficient revenue to cover their expenses (Caporale et al., 2017). If liquidity risk is assessed individually without taking into consideration all other macroeconomic factors, the risk of insolvency may arise. Therefore, it is important to take note that as much as liquidity risk is a significant cause of insolvency, it may be coupled with several other factors, which, if not assessed, may lead to insolvency. It is therefore concluded that liquidity, GDP, inflation, interest rate, governance, and capital structure are found to be statistically significant macroeconomic variables determining insolvency for non-life insurers in Zimbabwe. Although among the variables, GDP is positively related to solvency, which contributed to the study gap, on which the study is formulated by the researcher and is expected to be a direct link between the two variables. This has proven that internal and macroeconomic elements significantly predict the solvency of non-life insurers in Zimbabwe, either negatively or positively. The GDP explains the extent to which external factors where insurers operate determine the insolvency of the insurance companies. This therefore means that not only factors within the day-to-day business operations can affect the financial soundness of insurers, but also the external environment. Additionally, macroeconomic factors such as inflation, exchange rate fluctuations,

and political instability can also contribute to insolvency risk for non-life insurance companies in Zimbabwe. For example, hyperinflation can result in the devaluation of currency, which can negatively impact the financial stability of insurance companies that have invested in foreign currency-denominated reserves (Ehiogu & Duruechi, 2021). Political instability can result in a loss of investor confidence, which can make it difficult for these companies to raise capital. These factors are beyond the control of either managers or shareholders and therefore can lead to liquidation of assets to raise funds.

It, therefore, recommends that insurance companies put in place a strategic capital structure as recommended by regulatory authorities to remain solvent because too high levels of liquidity increase the probability of insolvency. This will also counter the liabilities with a proper asset maturity horizon, which enables meeting future obligations. Additionally, insurance companies adhere to prudential underwriting and maintain risk-based pricing during periods of high economic growth, as shown by GDP, to be able to settle their liabilities without becoming erratic financially, because there is a tendency for margin decline during periods of high GDP and other macroeconomic variables. Policymakers should promote and consistently create an enabling environment for policy implementation among insurance companies in Zimbabwe and also focus on promoting economic growth to support the expansion and stability of the short-term insurers sector in the country. Future research must concentrate on other regulatory and industry-level drivers of solvency to guarantee that all factors that were not included in the research are examined. This will provide for more generalisation of solvency determinants for the insurance companies in Zimbabwe and beyond.

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