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A review of the literature on "determinants of insurers' capital structure"

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ABSTRACT

Capital structure plays an essential role in the financial decision-making of a company by strengthening financial performance and worth. This research aims to provide a literature review to identify the factors that affect insurance companies' capital structure. The paper focuses on articles published from 2010 to 2021 on insurance companies' capital structure in developing countries were reviewed. Three theories were identified as having common determinants: trade-off, pecking order, and agency cost. These independent determinants include seven firm-specific determinants: company size, age, profitability, growth, liquidity, tangibility, and risk along with two macroeconomic determinants: economic growth and inflation rate. The research found that the leverage ratio is the primary measurement of capital structure used as a dependent variable. Furthermore, previous studies have shown that the static data model was the most appropriate framework in most research. This research provides future researchers with information on understanding the determinants of capital structure in the insurance field.

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1. INTRODUCTION

Capital structure plays a significant role in a company's financial decision-making. Capital structure is also crucial to strengthening a company's financial performance and worth. Capital structure is the blend of different securities a company provides to fund its activities [1]. Financial companies have different capital structures than non-financial companies. Therefore, most previous studies excluded all financial companies like investment companies, insurance companies, and banks from their dataset. The paper aims to identify the factors that affect insurance companies' performance. 20 published articles between the years 2010 to 2021 on the insurance sector's capital structure field from developing countries were reviewed. The developing countries in the literature and with the capital structure fields include Ghana, Ethiopia, Nigeria, Omani, Kenya, and Malaysia. Since capital structure for insurance companies is different from ordinary firms' capital structure. Perhaps different countries and regions would require different capital structures due to country policy or industry regulations.

This study has particular objectives, which are i) to recognize the most common determinants influencing insurance companies' capital structure, ii) to assess the measurement that is mostly used to measure insurance companies' capital structure, and iii) to determine the best suitable model of multiple regression used to test the relationship between the factors and insurance companies' capital structure.

Insight of the objectives mentioned above, the research questions are answered: i) What are the most common determinants influencing insurance companies' capital structure?; ii) What is the most prevailing measurement for measuring insurance companies' capital structure?; and iii) What is the most suitable model of multiple regressions to test the relationship between the factors and insurance companies' capital structure?

Insurance companies are vital in this business era where risk is certain to happen. Besides, the business world would be untenable to insurance companies' insurance [2]. Capital structure is a significant subject of study in the insurance sector since it differs from the non-financial sector. Insurance companies use reserve capital to pay for unexpected losses from insurance claims. Thus, insurance companies' main concern is maintaining a record of solvency and liquidation [3].

Much research has been done on capital structure, but there are still contradictory assumptions on theories; some are analyzed from the perspective of developed economies. Results from developed countries are appropriate for established economies but not for developing and underdeveloped economies. This research fulfilled the literature gap by presenting a literature review on capital structure determinants for insurance companies in developing economies [4].

There has been less study conducted on the viewpoint of emerging economies. It is uncertain if findings from research conducted on established countries can be applied to emerging economies, or whether other factors influence capital structure decisions in developing nations. Research on emerging nations presents conflicting perspectives on the factors influencing the capital structure of publicly traded corporations, with less focus on insurance firms. Although there is a lack of study on the factors influencing the capital structure of listed insurance firms, several studies have produced conflicting results. There has been little research conducted on the factors influencing the capital structure of publicly traded insurance firms. Further, Hassan [5] did not include company risk as a variable when measuring business characteristics. Adaramola and Olarewaju [6] did not include firm age as a characteristic of insurance businesses in their analysis. This research aims to fill the knowledge gap by investigating the factors that influence the capital structure of insurance firms.

2. LITERATURE REVIEW:

This literature review process starts with article valuation. Articles published to determine capital structure were investigated. Insurance organizations' capital structure has become an important area to be investigated because insurance organizations need assets and reserves to settle policyholders' claims. Assessment of capital structure patterns is necessary to prevent unusual circumstances of not having adequate assets to settle claims by policyholders.

To the best of the author's knowledge, capital structure determinants have been discussed in various literature reviews which are i) "Capital structure and firm performance: empirical evidence from India" [7]. In the previous year and during the last decade, the authors reviewed Indian and international research on capital structure determinants in the economy and the sector level. Their study includes one study in the insurance sector; ii) "Research on capital structure determinants: a review and future directions" [8]. The authors have an exclusive meta-analysis study that includes all industry types from 1972 to 2013 in most geographic regions. However, the authors only covered one study in the insurance sector; iii) "Capital structure determinants: a literature review" [9]. The authors analyzed the factors of the firm that influence the capital structure of companies in India. Some of the determinants include risks, cost of debts, and dividend payout ratio; iv) "The determinants of capital structure in insurance companies' evidence from Saudi Arabia" [10]. The author aims to address the research gap in Saudi insurance businesses by proposing solutions that might aid in financial decision-making. The findings indicate that profitability, age, and vulnerability of insurance firms have an exceptionally high adverse impact on the capital structure; and v) "Measurement matters-a meta-study of determinants of corporate capital structure" [11]. The authors examined the factors at the company level that influence the capital structure of corporates. The results showed that economic viability, profitability, and market-to-book ratio are important factors that influence a firm's capital structure. Hence, this research analyses empirical literature on the determinants of capital structure from different geographical areas, focusing on the insurance sector.

2.1. Theoretical background

Insurance is a concept that is based on risk transfer. For a company, capital structure is the percentage of capital or money in the particular company. Long-standing debt, temporary debt, common equity, and preferred equity mixture explain the capital structure. How the company's funds are used to maintain its overall operations and growth is also part of the capital structure. It is challenging to explain capital structure decisions in uncertain economies. Macro environmental factors such as high interest rates and volatility in the political and economic situation determine the capital structure in developing economies.

Most of the capital structure studies are done in developed economies where they have institutional similarities [12]. However, the institutional arrangements are different in different countries due to different economic nature, social, and cultural differences. Bas *et al.* [13] described that most of the past studies on capital structure have only been conducted in developed countries. The notion of capital structure gained significant prominence after Modigliani and Miller's demonstration in their paper that the decision between debt and equity has no substantial impact on the firm's value. This statement is valid under the assumption of flawless capital markets. A perfect market is characterized by the absence of any obstacles or hindrances, such as transaction and bankruptcy costs. Nevertheless, in reality, it is worth questioning the perfection of all financial markets. Capital structure becomes crucial when taking into account market flaws including transaction and bankruptcy expenses. Many theories have been developed to support the argument that capital structure influences the value of the company. Thus, companies should ensure that they are able to reach an optimal level of capital structure. Among the theories related to capital structures are agency theory, pecking order theory, and trade-off theory.

2.1.1. Capital structure theory

According to El-Sayed Ebaid [14], the company's capital structure could be described by two prevailing theories: the trade-off and the pecking order theories. These theories categorize numerous company-level features known as internal factors that impact company leverage, such as the company's size, profitability, liquidity faced by the company, and tangibility [15]. Decisions regarding capital structure are crucial for the well-being of the insurance company, since problems with the capital structure may lead to outcomes such as insolvency, insolvency, or financial suffering. Market share, in essence, indicates a firm's relative position compared to its competitors. In trade-off theory, capital structure positively influences its profitability, company size, liquidity, and tangibility. Based on the pecking order theory, capital structure negatively influences profitability and tangibility while positively affecting company size and liquidity.

2.1.2. Trade-off theory

Trade-off theory was first introduced by [16] and it was further developed by Modigliani and Miller. Myers [17] analyzed that the company's ideal capital structure is distinguished by the exchange of benefit and debt finance expense. According to trade-off theory, each monetary source has possessed profit and cost. Many research pieces [18], [19] gave experimental proof that supports trade-off theory. Ideal capital structure and the trade-off theory could be controlled by modifying the various benefits and expenses related to debt financing. The trade-off theory expects that there are benefits and expenses related to the usage of responsibility. As per trade-off theory, higher income is present in a profitable company to safeguard, and hence they ought to obtain more to take tax advantages. The theory is significant for this research because it aims to demonstrate how insurance companies determine goal control ratios based on profit-to-expense ratios, economic distress budgets, and aid expenditures. The trade-off theory is important as it elucidates that insurance firms are financed via a combination of debt and equity. Under the circumstances of a going concern, the company may possess insufficient reserves to support all of its endeavors. Hence, the concept serves to illustrate the impact of fairness and its sway on financial outcomes.

2.1.3. Pecking order theory

The pecking order theory was developed by Myers and Majluf. Based on this theory, it was believed that under disorganized data among internal and external financing, companies will fall back producing reserves to fund their development [17], [20]. However, in the requirement of external financing, companies decide to create obligations afore value. As indicated by the pecking order theory, profitable companies generate a high level of income. They prefer less debt than those who produce a low-income level as profitable companies rely on their reserved income for fulfilling obligations.

Further, researchers [8], [21] supported this theory and examined detailed managerial activities. Nevertheless, this theory does not consider the tax shield impact [22]. In addition, researchers [1], [23] use this theory to investigate capital structure and found that a company’s performance is negatively influenced by capital structure. It is shown that the pecking order theory is generally appropriate to be applied to large and small companies.

The pecking order idea posits that a corporation should prioritize financing itself internally via retained profits. If this particular source of funding is not accessible, a corporation should next seek to get funds by means of borrowing. Ultimately, as a last option, a corporation should fund itself by issuing additional equity [11]. The concept is crucial for the study as it clarifies the rationale behind insurance businesses prioritizing internal financing over debt and equity when funding investment projects. Insurance corporations may mitigate information asymmetry, a common issue in equity financing, by relying solely on internal finances. This approach ensures that outside investors, who may have little knowledge about the

company's operations and financial status, are not at a disadvantage. This approach effectively mitigates ownership dilution, a prominent worry for firms, by using equity as a last choice. The issuance of additional shares might potentially dilute the ownership percentages of current stakeholders.

2.1.4. Agency theory

An agency theory was introduced by Jensen and Meckling [24]. In the finance literature, this theory has been given substantial consideration in determining companies' capital structure. This theory proposed a nexus of principal-agent link among company investors most significantly between the asset's suppliers, which creates agency issues. Especially when the problems associated with debt suppliers are not tended to. The agency problem presumes that managers of companies do not increase investors' wealth, yet they work to make the most of their welfare. Abor [25] said that settling the agency issue is the cost of the agency, and the whole structure of the financial claim is used to settle it by the company. Subsequently, to successfully diminish agency issues, the capital structure must be altered. Harris and Raviv [26] upheld this idea and along these lines showed that managers have the motivation to proceed with a company's present tasks regardless of whether investors are inclined towards liquidation. The significance of this theory lies in its use in comprehending the dynamics between agents and principals. Agents operate as representatives of the principal and have a duty to prioritize the principal's interests above their own.

2.1.5. Empirical review on determinants of capital structure of insurance companies

The association between capital structure and company performance has been extensively discussed in the finance literature [27], [28]. The impact of capital structure on company performance has been analyzed in developing and developed economies.

Ahmed *et al.* [2] studied the capital structure determinants in insurance organizations in Pakistan from 2001 to 2007. He proved that size, productivity, liquidity, and risk are capital structure determinants for Pakistan's insurance companies. Consequently, Pakistan's life insurance companies were found to follow the pecking order theory whereby productivity, liquidity, and age have been found to have a negative relationship. However, a positive relationship is identified between leverage and size, which is consistent with trade-off theory. Another outcome was also observed where the leverage relationship with tangibility and growth was insignificant.

Najjar and Petrov [29] assessed the influence of corporate governance on five insurance companies in Bahrain between 2005-2009 utilizing five variables: profitability, growth opportunity, company size, liquidity, and assets tangibility. The least-square outcome indicated that company size, liquidity, and asset tangibility affect capital structure decisions. The positive association of leverage was identified with company size and tangibility while a negative relationship of debt level of insurance companies in Bahrain with liquidity was observed. Hassan [30] explored capital structure determinants in 15 insurance companies in Nigeria from 2001-2010. He utilized five variables which are age, size, growth, profitability, and tangibility. By using multiple regressions, his outcomes uncover that all the variables have affected leverage. Additionally, he stated that the pecking order theory and trade-off theory endorsed profitability and tangibility, respectively.

Another research has been done from 2004 to 2009 to find an ideal capital structure in 31 Pakistan insurance companies. The results found that there is an indirect relationship between leverage and age, profitability, and earning instability. On the other hand, the negative and insignificant relationship of liquidity with the debt ratio is analyzed. Besides, size and growth have a direct relationship with leverage. These results are following the pecking order theory and trade-off theory [31].

Kumar *et al.* [32] researched the Indian insurance sector to determine the financial capital structure. He revealed that there is a significant relationship between the size and capital structure of the company. The structure of the company's assets is also significantly associated with capital structure. Also, capital structure and return on assets (ROA) have a positive relationship.

Researchers [33], [34] analyzed the relationship between seven company-explicit capital structure factors (productivity, liquidity, growth, age, risk, tangibility, and size) for 12 insurance companies in Ethiopia from 2004 until 2010. Using a panel regression model, three models such as the debt to-debt-to-equity ratio of a company, the company's total debt ratio, and the company's long-term debt ratio. The outcomes indicated that the company's growth opportunity, profitability, age, liquidity, and risk significantly affect the capital structure; it is based on estimation by long-term obligation and complete debt ratios.

The determinants of capital structure in insurance companies from 2002 to 2007 in Ghana were analyzed in the study [3]. The paper investigated the size, risk, growth, tangibility, tax, and profitability as independent variables. Using ordinary least squares, the outcomes indicated that capital structure theories such as trade-off theory and pecking order theory were significant in clarifying insurance companies' capital structure in Ghana. There is a statistically significant relationship between company size, growth, and profitability with leverage.

Sherif and Elsayed [35] also inspected the capital structure's impact on Egyptian insurance companies' corporate qualities from 2006 until 2011. The independent variables were growth, profitability, liquidity, tangibility, size of the company, age, and non-debt tax shields. They found that the company's size, assets tangibility, profitability, and age of the company were related to leverage. Again, growth, liquidity, and non-tax shield have an impact on the leverage of Egyptian insurance companies.

The relationship between firm-specific variables and macroeconomic variables on leverage was assessed through a panel data regression model from the company's annual reports and 18 insurance companies' financial statements recorded with the National Insurance Commission in Ghana. The results proposed that a strong relationship is seen between company characteristics macroeconomic variables and capital structure. Also, there is a significant, and inverse relationship of leverage exists with firm-specific variables such as company size, liquidity, and tangibility of Insurance companies [36]. Conversely, substantial, significantly positive relationship risk is exhibited with leverage in insurance companies. Firm-specific variables such as age, performance, and growth of companies show an insignificant positive and negative relationship, respectively [37]. Hence, they are not vital determinants of the capital structure of insurance companies in Ghana. Relating to the macroeconomic variables, the exchange rate is the essential determinant of capital structure because it revealed a significant negative relationship with leverage [38].

Shala *et al.* [39] assessed the determinants of capital structure among 11 companies in Kosovo from 2009 until 2012. The independent variables were company size, life and growth of the company, fixed assets, and liquidity ratio. Their outcomes indicated that these variables were in a positive association with the debt ratio. Then again, company size, liquidity ratio, and growth had significant effects on the debt ratio.

Further, Rahman *et al.* [40] led an investigation on capital structure decisions of 5 life-insurance companies in Pakistan from 2007 to 2013 by using company profitability, growth, risk, tangibility, size, and age as independent variables. The ordinary least squares (OLS) regression model implied that the essential factors are profitability, risk, liquidity, size, and age. Sritharan [41] broke down the capital structure determinants of 28 listed banks and Finance and Insurance Companies in Colombo Stock, Sri Lanka from 2008 to 2012 using six company-explicit variables, particularly profitability, size, growth, tangibility, liquidity, and non-debt tax shields. Their statistical results showed a negative association of debt ratio with company growth, profitability, and liquidity, and a positive association of company size. Adaramola and Olarewaju [6] analyzed the 8 chosen insurance company's capital structure determinants in Nigeria during 2008-2014 utilizing profitability, size, tangibility, liquidity, growth, and risk as independent variables. Their outcomes found a negative impact of leverage on growth, liquidity, and tangibility, and a positive relationship is examined for size, risk and ROA with leverage.

A research study in Kenyan insurance organizations was done to examine the impact of firm-specific factors as proposed by numerous theories on the ideal capital structure of registered insurance companies between 2003 and 2012. Results showed that high-profitability insurance organizations in Kenya mostly use leverage to support their investments. Profitability companies in the insurance segment have low risk and consequently may choose to use more debt finance. Additionally, high-growth insurance companies intended to use leverage to finance their investments compared to companies having a low level of growth. Also, due to low debt risk, the highly profitable companies use more debt financing. It is also revealed that management control has a moderating but significant impact on capital structure decisions. These outcomes were consistent with the agency theory of capital structure in terms of management impact [42].

One of the research studies observed the determinants of capital structure in 39 stock market-registered Bahraini companies. It shows that one of the determinants of a company's capital structure is profitability (book leverage and market leverage). It means that highly profitable companies mostly rely on auto financing except for debt. Results analyzed the weak and significantly positive relationship between risk and market leverage of debt ratio and the insignificant relationship of book leverage of debt with risk. It proves that there is no significant impact of risk on capital structure. The result also indicates that growth is not a determinant of capital structure [43].

Similarly, Kinde [33] inspected the determinants of 17 chosen insurance companies' capital structure in Ethiopia from the years 2005-2014. The researcher utilized nine independent variables (growth opportunities of the company, the risk associated, company size, assets tangibility, liquidity of the company, age, management efficiency, inflation, and gross domestic product). Their regression results revealed that age, economic growth rate (GDP), and inflation were accepted as the critical significant determinant factors of capital structure and positively interrelated with capital structure. Furthermore, the insignificant influence of size, assets tangibility, and liquidity on the capital structure of companies. Also, Takele and Beshir [44] analyzed firm-specific factors' impact on 8 Ethiopian insurance companies' capital structure decisions from 2005 to 2014. This study used panel-fixed effects models and predicted that the profitability and liquidity relationship was significant, and the relation of risk with company size was insignificant. However, the

tangibility of the company's assets and growth opportunities of substantial impact on the total debt ratio has a significant and insignificant impact on debt-equity ratio.

Another research paper indicates that the capital structure is different in banks and insurance companies. The study analyzed that the financial crisis impact is negative on banks' capital structure as a crisis makes them deleveraged [45]. In comparison, insurance companies' capital structure was positively influenced by the financial crisis. Significantly, bank leverage and profits have negative relationships indicating that the financing behavior of the South African banks can be explained by the pecking order theory. As there is an inverse relationship between profits with insurer leverage in banks, the study predicted the South African insurance companies' capital structure could be explained in terms of pecking order theory.

Pecking order theory can explain the financing behavior of the South African Banks' capital structure for thirteen years, from 2006-2018. The results revealed that company size has a positive and insignificant influence on capital structure in listed insurance companies. In contrast, age and capital structure are positively associated. Regression results identified that asset tangibility impact on capital structure is insignificantly negative; risk has an insignificant positive impact on the capital structure [46]. It is also found that insurance growth has a significant and positive impact on capital structure. The study found that company size, age, the tangibility of assets, growth, and insurance risk are critical factors in determining the capital structure of insurance companies in Nigeria [47].

Elmahgop [10] investigated the capital structure determinants of 28 insurance companies listed on the Saudi Stock Exchange. The results of random effect regression revealed that the key determinants of the capital structure of Saudi insurance companies are profitability, age, size, growth rate, and risk. The conventional and contemporary methods of study provide several uncertainties and unresolved issues that need further investigation. The results on the factors influencing capital structure do not seem to align with a single theoretical framework. While each thought may seem reasonable individually, it is now necessary to explore fresh concepts in empirical study and acknowledge the limitations and implicit goals that arise from adhering to established theories [11]. Researchers should acknowledge prior publications, but adhere strictly to the factual findings of their study. Consequently, future researchers need to conduct completely autonomous analyses in order to facilitate additional advancements in the study of the factors influencing capital structure.

3. RESEARCH METHOD

This research assesses twenty published articles on the capital structure of the insurance sector from 2010 to 2021. The articles define the methodology of determining capital structure factors in the last decade by concentrating on the insurance sector, where these publications comprise specific studies in national and international journals or conferences. On the other hand, books, dissertations, and exclusive reports in news magazines are not included in the reviews because the writers feel they contain standard information.

This research study consists of several steps, which are i) Updating the databases to confirm that the literature is as recent as possible; ii) The collection of the literature was started from December 2022 till April 2023; iii) Using an electronic database only for searching the literature; and iv) All publications' bibliography was listed in the Excel spreadsheets.

4. RESULTS AND DISCUSSION

This research found that the company's capital structure combines debt and equity security to finance tangible investment. According to Ogbulu *et al.* [48], although various theories have been established, companies are still having difficulty gaining optimal capital structure. It has appealed to the attention of the researcher. Empirical studies have used leverage as a dependent variable for capital structure, measured by the total debt ratio [49]. Muhammad *et al.* [1] defined debt to equity ratio as measuring the risk of a company's capital structure regarding the relationship between creditors and funds delivered.

The decision on independent variables depends on twenty research studies gathered from several nations. Further, Chadha and Sharma [7] introduced the significant capital structure determinants referenced in other research (company size, age, profitability, liquidity, growth, tangibility, and risk). However, more research is needed to address macroeconomic determinants such as inflation, GDP, and interest rates.

Finally, all researchers have used regression to examine the relationship between an independent and dependent variable [45]. It is found that most of the researchers have used OLS multiple regression with three estimation models: fixed-effects, random-effects, and static panel data analysis. Thus, it can be determined that the random effect model was least compared to the fixed panel regression model in finding the determinants of the capital structure of insurance companies. Table 1 describes the summary of the empirical evidence discussed above.

Table 1. Summary of empirical studies on determinants of capital structure of insurance companies

Determinants	List of Authors	Relationship with Leverage	Theory
Firm size	Ahmed *et al.* [2]; Tornyeva [3]; Adaramola and Olarewaju [6]; Elmahgop [10]; Najjar and Petrov [29]; Sharif *et al.* [31]; Kumar *et al.* [32], Kinde [33]; Guruswamy and Marew [34]; Sherif and Elsayed [35]; Shala *et al.* [39]; Rahman *et al*. [40]; Sritharan [41]; Wahome *et al.* [42]; Meero [43]; Takele and Beshir [44]; Sibindi and Makina [46]; Bala and Abatcha [47]	Positive	Trade-off theory
	Hassan [30]; Gatsi and Gadzo [38]	Negative	Pecking order theory
Age	Kinde [33]; Guruswamy and Marew [34]; Sherif and Elsayed [35]; Gatsi and Gadzo [38]; Bala and Abatcha [47]	Positive	Trade-off theory
	Ahmed *et al.* [2]; Elmahgop [10]; Hassan [30]; Sharif *et al*. [31]; Rahman *et al.* [40]	Negative	Pecking order theory
Profitability	Adaramola and Olarewaju [6]; Kumar *et al.* [32]; Sherif and Elsayed [35]; Wahome *et al.* [42]	Positive	Trade-off theory
	Ahmed *et al.* [2]; Tornyeva [3]; Elmahgop [10]; Najjar and Petrov [29]; Hassan [30]; Kinde [33]; Gatsi and Gadzo [38]; Rahman *et al.* [40]; Sritharan [41]; Meero [43]; Takele and Beshir [44]; Sibindi and Makina [46]	Negative	Pecking order theory
Growth	Tornyeva [3]; Elmahgop [10]; Hassan [30]; Kumar *et al*. [32]; Shala *et al.* [39], Rahman *et al.* [40]; Wahome *et al.* [42]; Meero [43]; Takele and Beshir [44]; Sibindi and Makina [46]; Bala and Abatcha [47]	Positive	Pecking order theory
	Ahmed *et al.* [2]; Adaramola and Olarewaju [6]; Sharif *et al*. [31]; Kinde [33]; Guruswamy and Marew [34]; Sherif and Elsayed [35]; Gatsi and Gadzo [38]; Sritharan [41]	Negative	Trade-off theory
Liquidity	Kinde [33]; Shala *et al.* [39]	Positive	Trade-off theory
	Ahmed *et al*. [2]; Adaramola and Olarewaju [6]; Najjar and Petrov [29]; Sharif *et al.* [31]; Guruswamy and Marew [34]; Sherif and Elsayed [35]; Gatsi and Gadzo [38]; Rahman *et al.* [40]; Sritharan [41]; Takele and Beshir [44]	Negative	Pecking order theory
Tangibility	Tornyeva [3]; Najjar and Petrov [29]; Hassan [30]; Kumar *et al.* [32]; Kinde [33]; Guruswamy and Marew [34]; Sherif and Elsayed [35]; Shala *et al.* [39], Rahman *et al*. [40]; Sibindi and Makina [46]	Positive	Trade-off theory and pecking order theory
	Ahmed *et al.* [2]; Adaramola and Olarewaju [6]; Gatsi and Gadzo [38]; Sritharan [41]; Takele and Beshir [44]; Bala and Abatcha [47]	Negative	Agency cost theory
Risk	Ahmed *et al*. [2]; Adaramola and Olarewaju [6]; Kinde [33]; Guruswamy and Marew [34]; Gatsi and Gadzo [38]; Rahman *et al.* [40]; Meero [43]; Sibindi and Makina [46]; Bala and Abatcha [47]	Positive	Pecking order theory
	Tornyeva [3]; Elmahgop [10]; Wahome *et al.* [42]; Takele and Beshir [44]	Negative	Trade-off theory
Economic growth rate GDP	Guruswamy and Adugnaw [34]; Gatsi and Gadzo [38]	Positive	Trade-off theory
Inflation rate	Guruswamy and Adugnaw [34]; Gatsi and Gadzo [38]	Positive	Trade-off theory

5. CONCLUSION

In this research, twenty internationally published articles in the field of insurance companies' capital structure were reviewed. The study covered published articles from 2010 to 2021 from developing countries. The review shows that the leverage ratio is an essential measurement of capital structure used as a dependent variable. The results provide common determinants found in three theories, trade-off, pecking order, and agency cost theories. These determinants involved seven firm-specific determinants (company size, company age, profitability, growth, liquidity, tangibility, and risk) and two macroeconomic determinants: economic growth and inflation rate as independent variables. This research also found that multiple regression and fixed effect models are the best regression models used in the literature. This research delivers practical information and data for researchers interested in understanding the determining factors of capital structure and further possible areas for future study. In the future, the empirical literature may address any of the research gaps: i) to study how long-term debt is different from short-term debt, ii) to expand the data to countries in developing nations, such as the Gulf Cooperation Council (GCC), and iii) to also incorporate external variables or macroeconomic factors like inflation in-country, gross domestic product, interest rates fluctuations, regulation, and ownership structure as independent variables.

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