IMPACT OF CAPITAL STRUCTURE ON PROFITABILITY OF INSURANCE COMPANIES IN NEPAL

A Dissertation submitted to Office of the Dean, Faculty of Management in partial fulfillment of the requirements for the Master's Degree

by

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CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled "**Impact of Capital Structure on Profitability of Insurance Companies in Nepal**". The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has been proposed and presented as part of requirements for any other academic purposes.

The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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REPORT OF RESEARCH COMMITTEE

Ms. Bimala Bhatta has defended research proposal entitled **"Impact of Capital Structure on Profitability of Insurance Companies in Nepal**"**"** successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Bhoj Raj Ojha and submit the thesis for evaluation and viva voce examination.

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APPROVAL SHEET

We, the undersigned, have examined the thesis entitled We, the undersigned, have examined the thesis entitled **"Impact of Capital Structure on Profitability of Insurance Companies in Nepal**"**"** presented by Bimala Bhatta a candidate for the degree of master of Business Studies (MBS Semester) and conducted the Viva voce examination of the candidate. We herby certify that the thesis is worthy of acceptance.

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This study entitled "Impact of Capital Structure on Profitability of Insurance Companies in Nepal" has been prepared in partial fulfillment for the Degree of Master of Business Studies (MBS) under the Faculty of Management, Tribhuvan University is based on research models involving the use of quantitative aspect of impact of capital structure on profitability of insurance companies in Nepal.

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Bimala Bhatta

Date: ……

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ABBREVIATIONS

AD	:	Anno Domini
BS	:	Bikram Sambat
CNBC	:	Consumer News and Business Channel
CV	:	Coefficient of Variation
DAR	:	Debt to Assets Ratio
DER	:	Debt to Equity Ratio
EICL	:	Everest Insurance Company Limited
F/Y	:	Fiscal Year
GP	:	Gross Premium
HGICL	:	Himalayan General Insuramcne Company Limited
IT	:	Information Technology
LSIZE	:	Natural Logarithm of Total Assets
Ltd.	:	Limited
NRB	:	Nepal Rastra Bank
ROA	:	Return on Assets
ROE	:	Return on Assets
SD	:	Standard Deviation
SICL	:	Sikhar Insurance Company Limited
TU	:	Tribhuvan University

ABSTRACT

This study investigates the impact of capital structure on profitability of insurance companies in Nepal. Data was collected from insurance companies in Nepal over a ten-year span (2012/13 to 2021/22). The study employed descriptive analysis, correlation analysis, and multiple regression analysis using SPSS version 26. This study shows that insurance companies have greate contribution to investors fund and strong capital adequacy position due to high debt to equity ratio. Morevoer, in this study, insurance companies shows a large share of financing by the insurers relatively to the owners and there is risky for the insurers due to the high leverage ratio or debt equity ratio. Profitability is the measurement of efficiency. When insurance companies have high Return on Assets (ROA) and Return on Equity (ROE), it indicates that they are efficiently using their total assets. This means investors are receiving better returns on their investments, and the company is performing well. The correlation analysis shows that debt equity ratio (DER) has insignificant positive relation with ROA. At the same time, the debt-to-equity ratio has a significant positive relationship with Return on Equity (ROE). There is also a notable positive correlation between the debt-to-total-assets ratio and both ROA and ROE. However, the size of the companies shows an insignificant negative relationship with ROA and a significant negative relationship with ROE. Regression analysis indicates that the debt-to-equity ratio has a significant negative impact on ROA but an insignificant positive impact on ROE. Conversely, the debt-to-assets ratio has a significant positive effect on the profitability of insurance companies, as measured by both ROA and ROE. Moreover, size of companies has insignificant positive impact on profitability (ROA and ROE) of the insurance companies in Nepal.

Keywords: Return on assets, return on equity, debt to equity ratio, debt to assets ratio and size of companies.

CHAPTER I
INTRODUCTION

1.1 Background of the Study

The process via which a company raises money to launch and grow its commercial operations is explained in its capital structure. It represents the blend of various types of debt and equity capital that a company holds due to its financing decisions. Finance is an essential element of all business operations. Businesses could not function without funding to support their fixed assets and working capital needs. The capital structure decision is the most important one when it comes to making investments in capital since it has a direct impact on an enterprise's profitability. As such, careful consideration must be paid while choosing a capital structure (Bhattarai, 2005).

The ratio of debt to equity or the makeup of long-term sources of funding, such as preference capital, debentures, long-term debt, and equity capital that includes service and surpluses, or retained earnings, but excludes short-term indebtedness, is referred to as the capital structure. The combination of several funding sources that a business employs to support its operations is referred to as its capital structure; each business has a very diverse capital structure. For example, while some companies depend heavily on borrowing, others are primarily financed through shareholders' equity. To start, we need to define what constitutes an optimal capital structure. This would be a structure that minimizes the company's overall cost of capital, meaning a lower required rate of return on the total capital invested. A reduced cost of capital enhances the discounted value of the company’s future cash flows, thereby increasing its overall value. Thus, the objective is to determine the capital structure that achieves the lowest total cost of capital and, consequently, maximizes the company's value (Pradhan & Bhattarai, 2016).

One of the most crucial decisions a financial manager makes is the choice of capital structure. This is because the optimal capital structure minimizes the total cost of capital while maximizing shareholder value. To grasp this, it is essential to first understand the financial structure before delving into the specifics of capital structure (Gautam & Thapa, 2004).

A firm’s capital structure, often known as its capitalization, is its long-term debt, preferred stock, and shareholder equity. Thus, a company’s capital structure is essentially a component of its financial structure. It influences both the company’s liquidity and its capacity for long-term profitability. The term specifically includes long-term debt and the total equity invested by shareholders. Some companies do not actively design their capital structure; instead, it develops organically based on the finance manager's decisions without formal planning. While such companies might perform well in the short term, they could face significant challenges in sustaining their operations and generating revenue over the long term. Unplanned capital structures can also hinder these companies from using their resources as efficiently as possible. Ideally, the finance manager should design an optimal capital structure for the company. The ideal structure is achieved when the market value per share is maximized. However, identifying this optimal capital structure in practice is a challenging task that requires innovative thinking (Barges, 1963).

The choice of capital structure has an impact on the company's overall worth. To ensure a balance between risk and return for shareholders, an appropriate debt-to-equity ratio is essential. The goal of a company’s capital structure should be to maximize value. The optimal capital structure is one that enhances shareholder wealth while minimizing the opportunity cost of capital, and it is characterized by a suitable debt-to-equity ratio (Jaishi, 2020).

Sharma (2019) stated that a company’s capital structure, which is determined by its ratio of total debt to total assets at book value, affects its riskiness and profitability. According to various definitions from earlier scholars, capital structure refers to the combination of debt and equity used to finance a business. Equity is generated when companies sell a share of ownership to raise funds for operations and capital projects. Debt, on the other hand, involves borrowing money with the obligation to repay it with interest within a specified timeframe. A well-designed capital structure is crucial for maximizing asset efficiency. Since capital structure directly affects a company's success, the decision between using debt and equity remains a critical factor.

Profitability ratios are essential for assessing a company's financial performance. Efficiency is gauged by profitability, which ultimately determines the success or

failure of a business. A careful balance between debt and equity is essential for financial organizations to maximize their profits. This study aimed to examine how financing decisions impact the profitability of insurance companies in Ghana, particularly focusing on the profitability of their core business activities. The findings will provide financial managers with practical insights into potential issues related to capital structure and profitability, helping them identify the optimal capital structure to achieve the highest possible company profitability and, consequently, maximize shareholder value (Bhatta, 2023).

Non-life insurance businesses play a wide range of roles in Nepal. In an insurance company, performance is typically assessed through metrics such as net premiums received, annual turnover, underwriting profitability, returns on investment, and return on equity. These metrics are categorized into investment performance and profit performance indicators. Properly utilizing the substantial funds generated by the industry can positively impact the broader economy. Therefore, conducting comprehensive research is crucial to prevent failures within the insurance sector. Examining how insurance companies can enhance their profitability is equally important. Over the past decade, significant progress has been made in understanding the relationship between capital structure and profitability. Besides improving the solvency of insurers, profitability plays a key role in persuading policyholders and shareholders to invest in insurance companies.

1.2 Problem Statement

Regardless of industry preference, the maxim "survival for the fittest" has become a catchphrase for all enterprises in the modern world. Management is tasked with making a range of decisions regarding asset financing, from short-term to long-term strategies. It is crucial to evaluate the advantages and disadvantages of debt versus equity financing, considering each option's effect on the company. This process is particularly challenging due to the complex theoretical foundations surrounding how capital structure influences the value of an insurance company. The connection between these two variables is undeniable, making it essential to define their nature and significance. However, beyond these common issues, the insurance industry also faces challenges related to its suboptimal organizational structure, which non-financial institutions must address. A company's success and prosperity hinge on its

ability to maximize shareholder wealth, or return on equity. In the case of Nepalese insurance companies, the imbalance in their capital structure affects their capacity to maximize overall value.

Any business organization's ability to maximize returns to stakeholders depends on its choice of capital structure (Akintoye, 2008). Numerous research studies have been conducted to examine the correlation between financial leverage and performance. Research by Akintoye (2008), Dare and Sola (2010), and Tayyaba (2013) identified a positive correlation between capital structure and performance. In contrast, Iorpev and Kwanum (2012) discovered a negative correlation. Additionally, some studies have suggested that there is no significant relationship between capital structure and performance (Prahlathan & Rajan 2011).

Salim and Yadav (2012) found that growth positively affects financial performance across all sectors in Malaysia. However, they also reported that corporate financial performance indicators such as Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS) negatively impact the long-term debt ratio (LTD), short-term debt ratio (STD), and total debt ratio (TD). Additionally, Tobin's Q has a significant and positive influence on both long-term and short-term debt. Saeedi and Mahmoodi (2011) highlighted leverage, liquidity, size, and the managerial competency index had a positive statistically significant impact on the financial performance. Dogan (2013) observed however, that the financial leverage ratio had an adverse influence on return on assets. Furthermore, the performance of insurance businesses listed on Borsa Istanbul is statistically significantly impacted negatively by a firm's age and positively by a firm's size.

Bony and Moniruzzaman (2017) stated that there was a substantial difference in the D/A ratio, D/E ratio, and ROA between bank and insurance firms, but not in the EPS or ROE of the two types of businesses. Akani and Ifechi (2017) found there was a substantial negative association between capital structures (DER) and performance (ROA & ROE) in Nigeria, as well as a significant relationship between board size and performance. Musah (2018) mentioned that the profitability of Ghanaian banks was adversely correlated with both the short-term and long-term debt ratios. Profitability, however, was positively correlated with the overall debt ratio. Singh and Bagga

(2019) found that total debt and total equity ratios significantly impact profitability, as measured by Return on Assets (ROA) and Return on Equity (ROE).

The results also demonstrate that financial leverage was favorably significant to profitability. Almajali and Shamsuddin (2019) discovered that short-term debt (STD) and long-term debt (LTD) were positively associated with Return on Equity (ROE) but negatively related to Tobin's Q. Additionally, the equity-to-price ratio (ETP) was positively correlated with all profitability metrics. According to Jaishi (2020), the financial performance of insurance businesses in Nepal was found to be significantly influenced by many parameters, including the ratio of total debt to total assets, leverage, size, liquidity, and tangibility. Bhattarai (2020) concluded that the financial performance of Nepalese insurance businesses is influenced by the ratio of equity to total assets, leverage, and asset tangibility. Hajisaaid (2020) found a negative correlation between Return on Equity (ROE) and the short-term debt to total assets ratio (SDA). Additionally, there was a positive correlation between profitability and total debt (DA), while the long-term debt to total assets ratio (LDA) was negatively correlated with ROE.

Return on equity had an insignificantly positive relationship with long-term debt and deposits, but an insignificantly negative relationship with short-term debt and total debt, according to Bhatt and Jain (2020). Gundu (2021) reported a negative correlation between a firm's debt-to-asset ratio and Return on Equity (ROE) over the research period, indicating that a higher debt-to-asset ratio was linked to a lower ROE. Ngoc, Tien, and Thu (2021) found that capital structure negatively affects a company's performance as measured by its return on assets (ROA). Bogamuwa and Dharmasiri (2021) concluded ROA and ROE of Sri Lankan listed insurance businesses were statistically significant and negatively impacted by D/E and D/A.

Opoku-Asante, Winful, Sharifzadeh, and Neubert (2022) concluded that there is a significant negative correlation between financial performance and capital structure. They also found that the relationship between capital structure and financial performance remained unaffected by the maturity of debt. According to Dodoo, Kumi, and Mangudhla's (2023) analysis, capital structure—particularly STD and LTD—had a detrimental effect on the return on asset (ROA) of the firm. Tran,

Nguyen, Tran, and Duong (2023) observed that ROA and ROE are adversely affected by the capital structure. Furthermore, this analysis concludes that Vietnamese enterprises' profitability is negatively impacted by their short-term debt to total asset ratio. However, there aren't many studies in the specific field of insurance firms, thus this study will close a gap in the sector. The study's goal was to investigate how capital structure affects the profitability of insurance firms in Nepal. This has the following research questions:

- What is the existing situation of capital structure practices in selected insurance companies?
- Is there any relationship between capital structure variables and profitability of selected insurance companies?
- What is the impact of debt ratio, debt equity ratio, firm size on profitability of selected insurance companies?

1.3 Objectives of the Study

The main objective of this study is to analyze the impact of capital structure on profitability in Nepalese insurance companies. The specific objectives are given below:

- To analyze the existing position of capital structure of selected insurance companies.
- To measure the relationship between capital structure variables and profitability of selected insurance companies.
- To impact of debt ratio, debt equity ratio, firm size on profitability of selected insurance companies.

1.4 Research Hypothesis

The researcher anticipated that improved capital structure management would lead to a higher Return on Assets (ROA). Using the data, the study established and tested the following hypothesis:

Hypothesis 1 (H_0): Debt ratio has an effect on the profitability.

Hypothesis 2 (H_1): Debt ratio has no effect on the profitability.

Hypothesis 3 (H_0): Debt to equity ratio has as an effect on the profitability.

Hypothesis 4 (H_1): Debt to equity ratio has no effect on the profitability.

Hypothesis 5 (H_0): Firm Size has an effect on the profitability.
Hypothesis 6 (H_1): Firm Size has no effect on the profitability.

1.5 Rational of the Study

It is widely recognized that an insurance company influences the nation's overall economic conditions. An insurance company lacking adequate capital or the right mix of debt and equity is inconceivable. This study focuses on evaluating the capital structure of joint venture banks, aiming to achieve an optimal balance between debt and equity capital. Most banking transactions are conducted through businesses in both the public and private sectors. The primary objective of any business organization is to maximize its value, and the capital structure reflects this value. By providing valuable insights into the study's topic, various stakeholders—including students, investors, shareholders, financial managers, policymakers, customers, and funding agencies—can gain useful knowledge and benefit from the findings.

1.6 Limitations of the Study

The limitations of the study are as follows;

- This research only looks at three insurance companies: Everest Insurance Company Limited, Sikhar Insurance Company Limited, and Himalayan General Insurance Company Limited.
- The study is limited to the most recent ten fiscal years, specifically from 2012/13 to 2021/22.
- This study only focuses on capital structure and profitability and ignores other aspects.
- The whole study is based on secondary data.
- The study utilizes only selected financial and statistical tools.

CHAPTER- II
LITERATURE REVIEW

The literature review is a vital part of the study. It involves examining previous research to understand their findings, limitations, and to identify gaps for further investigation. This review encompasses various sources, including books, dissertations, reports, handouts, and articles from newspapers and magazines. This chapter is divided into two sections:

- Theoritical Reveiw
- Empirical Review

2.1 Theoritical Review

2.1.1 Theories of Capital Adequacy

The theories that are reviewed in this study are: the Modigliani and Miller (MM) theory, static trade-off theory, trade off theory, agency theory and capital structure theory.

2.1.1.1 Modigliani and Miller (MM) Theory

The groundbreaking research on capital structure done by Modigliani and Miller in 1958 established a foundation for the construction of the theoretical framework that would eventually house a number of different ideas related to corporate finance. In 1958, Modigliani and Miller introduced the well-known concept of "capital structure irrelevance," which posits that financial leverage does not affect a firm's value. However, their hypothesis was based on highly restrictive assumptions that do not hold true in reality, such as perfect capital markets, identical expectations, no taxes, and no transaction costs. The emergence of the idea of an "optimal" capital structure one that maximizes a firm's value and thereby reduces its overall cost of capital arose from the recognition of bankruptcy costs and the tax benefits associated with interest payments.

Modigliani and Miller (1958) revisited their original view by incorporating tax benefits into their analysis of a firm's capital structure. They highlighted that interest payments are tax-deductible, which means that companies can benefit from a "tax

shield" that reduces their tax liabilities and partially offsets the cost of interest. Consequently, in their 1963 revision, Modigliani and Miller recommended leveraging as much debt as possible to enhance profitability and maximize business value.

2.1.1.2 Static Trade-off Theory

Diverse capital structure theories exist about the connection between profitability and leverage. The trade-off theory suggests that businesses tend to opt for debt due to its tax advantages. Profitable companies, in particular, are likely to use more debt, as higher leverage enhances the value of their debt tax shield (Myers, 1984). According to this theory, firms seek a balance between the tax benefits of increased debt and the potential costs associated with financial distress. Besides the tax advantages, highly successful companies might also be encouraged to take on additional debt because of considerations related to agency costs and bankruptcy expenses. This is because highly profitable businesses have a greater ability to repay debt, reducing their risk of bankruptcy. As a result, they are more likely to seek additional debt to maximize their tax shield and benefit from more attractive loan terms. Consequently, the trade-off theory anticipates a positive relationship between leverage and profitability based on these factors.

2.1.1.3 Trade-Off Theory

According to the trade-off theory of capital structure, a business weighs the costs and advantages of using different levels of debt and equity financing to choose how much of each to employ. The traditional theory focuses on balancing the tax benefits of debt against the costs associated with bankruptcy. It suggests that while financing with debt provides advantages such as tax deductions, it also incurs costs related to financial distress and potential bankruptcy (Kraus & Litzenberger, 1973).

Anticipated expenses linked to financial difficulties significantly reduce a company's worth, acting as a counterbalance to the tax benefits of taking on more debt. Conversely, it is argued that capital can be very expensive. To compensate for the higher bankruptcy risk associated with increased financial difficulties and a lower capital ratio, investors demand a higher risk premium. Companies must assume greater risk to secure a larger risk premium on their investments, aiming to provide an

"adequate" return on equity. As capital levels increase, this risk premium also rises. Therefore, to avoid inefficient capital costs, higher levels of risk necessitate a greater proportion of equity in the company's capital structure. The ultimate outcome of the buffer effect and this negative incentive remains uncertain, as rising capital levels might also lead to increased default risk (Brealey & Myers, 2003).

2.1.1.4 Agency Theory

According to agency theory, a firm is a "nexus of contracts" made up of several resource providers. In agency theory, the two primary participants are agents, who manage the company's daily operations, and principals, who provide the funding. Agency costs arise because the interests of agents do not always align with those of the principals. These costs include expenses related to monitoring agents' behavior, such as implementing budgetary constraints, compensation policies (like stock options, bonuses, and other incentives), and financial losses from sales due to operational guidelines and management restrictions.

Agency theory also encompasses the costs associated with suboptimal decisions choices made in the interest of agents rather than principals as well as the bonding costs incurred by agents. According to agency theory, in modern firms with widely dispersed share ownership, managerial decisions often diverge from those needed to maximize shareholder returns (Berle & Means, 1932; Pratt & Zeckhauser, 1985). The theory suggests strategies to reduce agency costs, such as implementing management incentive programs that align managers' interests with those of shareholders by rewarding them for enhancing shareholder value.

2.1.1.5 Capital Structure Theory

Modigliani and Miller (1958) introduced the theory of capital structure, which posits that a company's capital structure does not affect its overall value. According to this theory, the market value of a firm remains unchanged regardless of whether it has high leverage or a lower debt component. Instead, a company's market value is determined by its operational profitability (Modigliani & Miller, 1958).

A company's capital structure refers to how it finances its assets, which impacts its overall capital adequacy. Businesses can fund their operations through a combination

of debt, equity, or varying mixes of both. A company's capital structure might include more debt than equity, more equity than debt, solely one type of financing, or an equal proportion of both debt and equity. Each approach has its own set of benefits and advantages (Kwan & Eisenbeis, 1995).

Many scholars have applied capital structure theory in both theoretical and empirical research across various financial and non-financial sectors. However, as noted by Bourke (1989), most studies have concentrated on the non-financial sector. There has been relatively little research on the capital structure of the financial sector, and even fewer studies focus on the factors affecting the Capital Adequacy Ratio (CAR) in the banking sector, particularly in developing countries.

2.1.2 Determinants of Capital Structure

Drawing from the various capital structure theories discussed, empirical research has pinpointed several company-level characteristics that impact an organization's capital structure or leverage. Key factors include the company's age, profitability, size, and asset structure. Additionally, elements such as the company's growth prospects, operational risk, and ownership and tax structure are also significant in shaping its capital structure.

2.1.2.1 Profitability

The relationship between capital structure and a company's profitability can be described through the use of the pecking order hypothesis, as previously mentioned. According to the hypothesis, corporations would prefer to use internally generated funds (IGF) over external financing for funding business projects or operations. This preference results in information asymmetry, as defined by Myers (1984), where the managers, who are internal stakeholders, possess more information compared to external stakeholders and market participants. The company would use the least risky source of funds before using the most risky one. This happens because managers of a firm have more detailed knowledge about the company's financial issues compared to external stakeholders.

According to this perspective, firms with higher profitability and better access to internally generated funds (IGF) are likely to rely on these funds rather than seeking

external financing. Conversely, companies with very low retained earnings are more likely to depend on external sources of funding, such as debt. Thus, retained earnings are considered the primary and most cost-effective source of funding. Titman and Wessels (1988) support this view, noting that companies with very high profit margins typically maintain lower debt ratios because they can generate sufficient capital internally for their business needs.

2.1.2.2 Size of a Firm

A company's size is one of the main factors that determines its capital structure or leverage. In terms of turnover or revenue, larger businesses typically use more debt. This is because larger companies, with more diverse revenue streams and more predictable income, are better equipped to handle greater debt ratios. Additionally, because they are thought to carry less operational or commercial risk, larger businesses are frequently preferred by outside funders.A company's size is one of the main factors that determines its capital structure or leverage.

In terms of turnover or revenue, larger businesses typically use more debt. This is because larger companies, with more diverse revenue streams and more predictable income, are better equipped to handle greater debt ratios. Furthermore, external parties frequently favor larger firms. Furthermore, loan servicing and interest should not be difficult to repay with rising turnover levels that can be converted into profit. Nonetheless, smaller businesses typically incur higher costs to address asymmetric information concerns with outside funding sources, which limits their ability to accept external recognition for their operations (Oppong-Boakye et al., 2013).

2.1.2.3 Growth

Pecking order theory states that emerging companies might use retain earnings to support short-term growth or development initiatives. However, pressure on retain profits would suggest that when internally produced funds run out, the company will need to go outside for funding to support its expansion. Mixed results have been found in the research about the relationship between leverage and growth prospects.

According to Myers (1977), leverage has a negative relationship with growth rate since fast-growing enterprises typically lack tax shields, making the advantage of tax deductibility of financing costs less valuable. Michaelas et al. (1999) found a favorable correlation between a company's leverage and long-term liabilities and its potential for future growth and development. Additionally, Oppong-Boakye et al. (2013) identified a negative relationship between debt and growth.

2.1.2.3 Firm risk

One of the key determinants of a firm's capital structure has been shown to be the degree of risk in the business. According to Catanias (1983), a company's operational hazard determines the optimal debt-to-equity ratio, which may be described by the tax shield bankruptcy cost hypothesis. Given the costs associated with agency and bankruptcy matters, there is no reason for a business to take full advantage of the 100 percent tax benefits offered by the static model structure. A corporation is more motivated to reduce leverage in its debt-to-equity ratio or capital structure as the likelihood of incurring these charges increases. Operating risk remains a key factor influencing a company's exposure to financial risk, as it increases the likelihood of being unable to meet debt obligations and facing higher costs due to less predictable profit streams.

Companies with greater earnings volatility are more prone to experiencing cash flow shortfalls that hinder their ability to repay debt. Kim and Sorensen (1986) found that businesses with a higher probability of business risk tend to manage financial risk less effectively and, consequently, assume lower levels of debt. On the other hand, Oppong-Boakye et al. (2013) proposed that companies with extremely high operational risk are more likely to have high levels of gearing, as equity investors are hesitant to fund companies with significant operational risk. These firms' management typically relies more on debt than equity.

2.1.2.5 Taxation

Numerous research papers have examined the impact of taxes on a company's financing decision. A portion of these papers dealt specifically with tax policy. Any company's financing decisions may be impacted by variations in its marginal tax rate

(MacKie-Mason, 1990). A company with a large tax cover, for example, is less likely to use debt to finance its operations since it lowers the effective marginal tax rate on the finance cost deduction (MacKie-Mason, 1990). This means that the company is less likely to achieve a zero tax rate or benefit from loss carryforwards. However, alternative tax-coverage strategies, such as depreciation, amortization, research and development (R&D) expenses, and investment costs, can effectively serve the same purpose as debt in mitigating tax liabilities.

From a research perspective, it is difficult to identify alternative placement by empirical means. It is still very difficult to pinpoint the precise variable that may be utilized in place of tax reduction that is not impacted by inflation or economic depreciation (Titman & Wessels, 1998). In addition, Oppong-Boakye et al. (2013) noted that, in comparison to unlisted businesses, companies that list on stock markets typically enjoy tax benefits. As a result, an increase in the corporate tax rate would generally be associated with an increase in equity capital since listed companies would be more inclined to take advantage of the special tax refund.

2.1.2.6 Firm's Age

The age of a company is seen as a reasonable benchmark for evaluating its social image in capital structure models. As the company continues to operate over time, it gradually builds a positive business image, which includes its reputation or goodwill concerning its management, products, and, most importantly, its ability to meet its obligations to stakeholders in a timely manner. This positive image, recognized by the market, contributes to the company's creditworthiness (Diamond, 1989).

2.2 Empirical Review

2.2.1 Review of Journals and Articles

Bony and Moniruzzaman (2017) examined a comparative analysis between commercial banks and insurance companies in Bangladesh on the basis of capital structure. The aim of this study was to compare the capital structures of insurance companies and commercial banks in Bangladesh. Specifically, the study sought to assess how the debt-to-equity ratio influences the performance of both Bangladeshi banks and insurance providers. For this five-year analysis, the yearly financial

statements of commercial banks and insurance companies were utilized. The total debt to equity ratio, the total debt to total funds ratio, and the performance metrics of ROE, ROA, and EPS are used in the study to evaluate the capital structure of commercial banks and insurance firms. The capital structure and performance of commercial banks and insurance firms have been compared using descriptive statistics and the t-test. However, this analysis finds that while the EPS and ROE of banks and insurance businesses did not differ much, the D/A, D/E, and ROA ratios did differ significantly.

Akani and Ifechi (2017) analyzed effects of capital structure and board structure on corporate performance of selected firms in Nigeria. This study utilized secondary data from forty listed companies on the Nigerian Stock Exchange (NSE) covering the period from 2008 to 2016 to examine the effects of board composition and capital structure on firm performance in Nigeria. After combining and pooling the data, various analyses were conducted, including unit root tests, co-integration tests, Granger causality tests, and regression analysis. The research findings indicate the presence of a noteworthy inverse correlation between capital structures (DER), a noteworthy association between board size, and a negative but insignificant correlation between board duality and performance (return on assets and return on equity) in Nigeria.

Musah (2018) investigated the impact of capital structure on profitability of commercial banks in Ghana. The study sought how the capital structure of Ghanaian commercial banks affected their profitability, which was determined by their return on equity and return on assets, as well as their short-, long-, and total debt ratios. Over a six-year period, from 2010 to 2015, the study examined 23 banks and gathered data from these banks' annual reports. Descriptive statistics, panel regression analysis, and correlation analysis were employed to analyze the data. The findings reveal that banks in Ghana exhibit a high degree of leverage, with debt financing comprising 84 percent of their total capital. Of this debt, 77 percent is short-term, despite an increase in the minimum equity capital of these banks. The results of the regression study showed a negative correlation between the profitability of Ghanaian banks and both the short- and long-term debt ratios. Nonetheless, the profitability of Ghanaian banks was favorably correlated with the total debt ratio. Regarding the control variables, the

profitability of the bank was favorably correlated with firm size, foreign ownership, and age, but the profitability of the bank was adversely correlated with the rise in client deposits. The findings indicate that commercial banks in Ghana should refocus their financing efforts from deposits to other sources because their dependence on short-term financing, or deposits, lowers their profitability. According to the findings, businesses must select the ideal balance between short- and long-term debt to optimize bank profitability.

Singh and Bagga (2019) analyzed the effect of capital structure on profitability: An empirical panel data study. The main objective of the study was to analyze how capital structure influences the profitability of fifty firms listed on the National Stock Exchange of India from 2008 to 2017. Multiple panel data regression models, correlation, and descriptive statistics have all been used to examine the data. The association between capital structure and profitability has been examined using four distinct regression models. The individual effects of the total debt and total equity ratios on profitability that is, ROA and ROE are examined in these models. Fixed effects, random effects, and pooled OLS have all been used to evaluate the four models. According to correlation research, the equity ratio (TETA) was positively correlated with both ROA and ROE, while the debt ratio (TLTA) had a negative effect on these performance metrics. The findings of the regression analysis show that while return on assets increases with an increase in equity, it decreases with an increase in total debt. The findings also demonstrated that a rise in total debt causes the return on equity to increase, whereas an increase in equity causes the return on equity to fall.

Almajali and Shamsuddin (2019) investigated the effect of capital structure on performance of insurance companies: evidence from Jordan. The main objective of the study was to investigate the impact of capital structures on Jordanian insurance companies' profitability. A sample of 19 insurance companies that were listed between 2008 and 2017 during a ten-year period on the Amman Stock Exchange was chosen. The functions related to profitability, as indicated by Tobin's Q and Return on Equity (ROE), are estimated using regression analysis and correlation techniques, in conjunction with capital structure measures such as short-term debt (STD), long-term debt (LTD), and equity financing (TQ). Sales growth and the inflation rate are also

included as control variables in the analysis. The study found that financial leverage has a significant positive relationship with profitability. It also showed that short-term debt (SD) and long-term debt (LTD) are positively correlated with Return on Equity (ROE) but negatively correlated with Tobin's Q. Equity (EQ) is positively correlated with all measures of profitability. These findings support the hypothesis that higher leverage is associated with increased profitability.

Jaishi (2020) analyzed capital structure and its impact on financial performance in insurance companies of Nepal. The goal of the study was to investigate the connection between Nepalese insurance firms' financial performance and their capital structure. The dependent variables are profits per share and return on assets. Size, liquidity, tangibility, equity to total assets ratio, and total debt ratio are examples of independent variables. This study examines the overall structure of capital structure and financial performance as well as their relationship using a causal comparative research approach that combines descriptive and analytical methods. Regression models are constructed to examine the impact on financial performance metrics, such as earnings per share and return on assets. The outcome demonstrated that insurance companies with higher debt ratios have more successful financial outcomes. Return on assets in the industry is positively correlated with an increase in debt ratio and tangibility, and negatively correlated with an increase in equity, size, and liquidity. Earnings per share is positively impacted by the debt ratio and tangibility, and negatively impacted by the equity, size, and liquid ratio. The main finding of this research is that the financial performance of insurance businesses in Nepal is mostly determined by the following factors: size, liquidity, tangibility, leverage, equity to total assets ratio, and total debt ratio. If Nepali insurance businesses wish to improve their financial performance, they should raise their tangible asset and total debt ratio while lowering their equity, firm size, and liquidity ratio.

Bhattarai (2020) investigated effects of capital structure on financial performance of insurance companies in Nepal. The study sought out how capital structure affected Nepali insurance companies' financial results. Information was gathered from the websites of the corresponding insurance firms' annual reports. 14 Nepalese insurance firms' panel data from 2007–08 to 2015–16 yielded 126 observations in total. Three models were used to examine the data: fixed effect, random effect, and pooled OLS.

The dependent variable in this study is return on assets, while the independent factors are company size, leverage, equity to total assets, liquidity ratio, and assets tangibility. As a consequence, it was determined that the ratio of equity to total assets, leverage, and the tangibility of assets all affected the financial performance of insurance businesses in Nepal.

Hajisaaid (2020) analyzed the effect of capital structure on profitability of basic materials Saudi Arab firms. The primary aim of the study was to examine the relationship between capital structure and profitability for eight companies in the basic materials sector in Saudi Arabia from 2009 to 2018. The statistical methods used include regression analysis, the fixed effects model, the random effects model, and the Hausman test. Return on Equity (ROE) is the dependent variable, while the independent variables are the ratios of total debt to assets (DA), long-term debt to assets (LDA), and short-term debt to assets (SDA). The findings indicated that Return on Equity (ROE) has a negative correlation with the short-term debt to total assets (SDA) ratio. Additionally, profitability is positively correlated with total debt (DA), while there is a negative correlation between the long-term debt to total assets ratio (LDA) and ROE.

Bhatt and Jain (2020) investigated capital structure and profitability of commercial banks in Nepal. The purpose of this study was to investigate the connection between Nepal's commercial banks' profitability and capital structure. Return on Equity served as a measure of profitability, and the control variables of bank size and asset growth were combined with short- and long-term debt, deposits, and the ratio of total debt to assets as a stand-in for capital structure. The explanatory capital structure factors were found to be predictive of bank profitability, as assessed by return on equity, by more than 40%. Additionally, it is shown that return on equity has an insignificantly positive relationship with deposits and long-term debt but an insignificantly negative relationship with short-term debt and total debt. All regression models showed a substantial positive relationship between profitability and bank size, meaning that the bigger the bank, the better the return to shareholders.

Gundu (2021) investigated effect of capital structure on financial performance of quoted composite insurance companies in Nigeria. This study evaluated the impact of capital structure on the financial performance of quoted composite insurance companies in Nigeria from 2015 to 2019. Using secondary data analyzed with STATA 13, the study explored the relationship between the independent variable (capital structure) and the dependent variable (financial performance). The results revealed a negative correlation between the firms' Return on Equity (ROE) and their debt-to-asset ratio during the study period, indicating that a higher debt-to-asset ratio was associated with a lower ROE. Additionally, there was a positive correlation found between the debt to equity ratio and return on equity, meaning that a higher debt to equity ratio corresponds to a higher return on equity. As a result, the report suggests that insurance firms in Nigeria increase the amount of debt they include in their capital structure mix while simultaneously working to reduce their debt to asset ratio.

Ngoc, Tien and Thu (2021) analyzed the impact of capital structure on financial performance of logistic service providers listed on Ho Chi Minh City Stock Exchange. The objective of this study was to investigate how capital structure influences the profitability, measured by Return on Assets (ROA) and Return on Equity (ROE), of thirty logistics companies listed on the Ho Chi Minh City Stock Exchange (HOSE) from 2012 to 2019. Using a quantitative approach with models such as Pool OLS, Fixed Effects Model (FEM), Random Effects Model (REM), and Feasible Generalized Least Squares (FGLS), the findings revealed that capital structure negatively impacts a company's profitability, as indicated by its ROA. The analysis did not find any statistical evidence to show that the capital structure of logistics companies during this period had an impact on profitability, as measured by Return on Equity (ROE).

Bogamuwa and Dharmasiri (2021) analyzed impact of capital structure on firms' profitability: evidence from listed insurance companies in Colombo stock exchange. This study utilized data from all insurance companies listed on the Colombo Stock Exchange between 2015 and 2019 to examine the impact of capital structure on firm profitability. The capital structure was assessed using the debt-to-asset (D/A) and debt-to-equity (D/E) ratios, while profitability was measured by Return on Equity (ROE) and Return on Assets (ROA). The findings, based on the random effects panel

regression approach, revealed that both D/E and D/A ratios have statistically significant negative effects on the ROA and ROE of Sri Lankan listed insurance companies. The study's conclusions recommend adopting a prudent capital structure strategy, emphasizing the reduction of debt capital and the increase of equity capital as a percentage of the total capital structure. This approach is suggested because these factors have the most significant impact on the profitability of listed insurance companies on the Colombo Stock Exchange (CSE).

Opoku-Asante et al. (2022) analyzed the relationship between capital structure and financial performance of firms in Ghana and Nigeria. This study aimed to investigate the relationship between capital structure and financial performance using a sectorial approach and considering loan maturity. It examined the association between loan maturity and capital structure through 425 cross-sectional firm-year samples from companies in Ghana and Nigeria, covering the period from 2014 to 2019. The empirical results indicated a strong negative relationship between financial performance and capital structure. Debt maturity did not significantly alter the overall relationship between capital structure and financial performance. However, industry-specific factors do influence how capital structure and financial performance are related. Additionally, while loan maturity affects the relationship between capital structure and performance in certain industries, it does not impact the overall market. This study, which builds on previous research, incorporated sector-specific and loan maturity data from businesses in Ghana and Nigeria to further explore these dynamics.

Dodoo, Kumi and Mangudhla (2023) examined the effect of capital structure on firm performance: empirical evidence from emerging economy. The primary objective of the study was to analyze how capital structure impacts business performance over a ten-year period (2008–2017), using panel data from 15 non-financial companies listed on the Ghana Stock Exchange. Empirical research, employing the two-step system Generalized Method of Moments (GMM) and Ordinary Least Squares (OLS) regression techniques, revealed that capital structure particularly short-term debt (STD) and long-term debt (LTD) negatively affects Return on Assets (ROA), a key performance indicator for businesses. Return on equity (ROE) indicates that the capital structure (LTD and DE) has no discernible effect on the performance of the

company. Based on these results, the study concludes that the financial performance of Ghana's listed non-financial enterprises is not significantly affected by capital structure. The robustness check lends credence to these findings.

Tran, Nguyen, Tran and Duong (2023) investigated capital structure and profitability of listed firms and a transition market, does debt maturity matter. The impact of capital structure and debt maturity on the profitability of businesses listed on the Vietnamese stock exchange was examined in this study. Feasible Generalized Least Squares are utilized instead of the Traditional Least Square since they produce more trustworthy results because they do not break the assumptions of heteroskedasticity and autocorrelation. The results of this study indicate that ROA and ROE are adversely affected by the capital structure. Moreover, this analysis concludes that Vietnamese enterprises' profitability is negatively impacted by their short-term debt to total asset ratio.. Due to the simpler requirements for issuance and lower borrowing rates compared to long-term debt, Vietnamese enterprises primarily rely on short-term loans. Ultimately, our research suggests that the long-term debt ratio and profitability have the opposite connection. The study's conclusions are in line with previous research, pecking order theory, and trade-off theory.

Boshnak (2023) investigated the impact of capital structure on firm performance: evidence from Saudi-listed firms. The purpose of this study was to examine the impact of capital structure on the performance of firms listed on the Saudi Stock Exchange (Tadawul). To facilitate hypothesis testing, the study employed models estimated using the Generalized Method of Moments (GMM), which accounts for issues such as autocorrelation, heteroscedasticity, and endogeneity. The findings revealed that long-term debt, total debt, and the debt-to-equity ratio significantly affected firm financial performance, as measured by Return on Equity (ROE), and market performance, as indicated by Tobin's Q. Conversely, short-term debt, long-term debt, total debt, and the debt-to-equity ratio all had a significant negative impact on the firm's operational performance, as measured by Return on Assets (ROA).

Table 1

Summary of Empirical Review

S.N.	Author/ Date	Title	Objective	Methodology	Major Findings
1	Bony, S. Z., & Moniruz zaman, M. (2017).	A comparative analysis between commercial banks and insurance companies in Bangladesh on the basis of capital structure.	To identify how debt-equity mix influences firm performance in banks and insurance companies in Bangladesh.	Descriptive statistics, t-test have been used to show the differences between commercial banks and insurance companies capital structure and performance.	This study found that that there was no significant difference between Bank and insurance companies EPS & ROE but there was a significant difference between Bank and insurance company's D/A ratio, D/E ratio and ROA.
2	Akani, H. W., & Ifechi, K. N. J. (2017).	Effects of capital structure and board structure on corporate performance of selected firms in Nigeria.	To examine the effect of capital structure and board structure on firm performance in Nigeria	Data were merged and pooled for analysis, the unit root test; co - integration, granger causality test, and regression were done accordingly.	The study found that there exists a significant negative relationship between capital structures (DER), a significant relationship between board size and a negative but not significant relationship between board duality and performance (ROA & ROE) in Nigeria respectively.
3	Musah, A. (2018)	The impact of capital structure on profitability of commercial banks in Ghana.	To examine the effect of capital structure (measures as short term debt ratio, long term debt ratio, and total debt ratio) on profitability (measured as Return on Assets and Return on equity) of commercial banks in Ghana.	Data was analysed using descriptive statistics, correlation analysis as well as panel regression analysis.	This study revealed that short term debt ratio and long term debt ratio are negatively related with profitability of banks in Ghana. However, total debt ratio was positively associated with profitability of Banks in Ghana. On the control variables, firm size, foreign ownership and age of the bank were positively associated with banks profitability whiles growth in customers' deposits was negatively associated with banks' profitability.
4	Singh, N. P., & Bagga, M. (2019)	The effect of capital structure on profitability: An empirical panel data study.	To evaluate the effect of capital structure on the profitability of 50 companies listed on National Stock Exchange of India from 2008 – 2017.	The data has been analyzed by using descriptive statistics, correlation and multiple panel data regression models.	Correlation analysis showed that debt ratio (TLTA) had a negative impact on ROA and ROE, whereas equity ratio (TETA) was directly related to both these performance variables. The regression analysis reveale that increase in total debt results in decrease in return on assets, while increase in equity results in increase in return on assets.

5	Almajali, M., & Shamsuddin, Z. (2019)	The effect of capital structure on performance of insurance companies: evidence from Jordan.	To investigate the relationship between capital structure and profitability among Jordanian insurance firms.	Regression analysis and correlation techniques are employed to estimate the functions relating profitability to capital structure.	Empirical results indicate that short-term debt (STD) and long-term debt (LTD) are positively correlated with Return on Equity (ROE) but negatively correlated with Tobin's Q. Additionally, equity (ETQ) is positively correlated with all profitability measures. The results also reveal that financial leverage has a significant positive effect on profitability.
6	Jaishi, B. (2020)	Capital structure and its impact on financial performance in insurance companies of Nepal.	To examine the connection between Nepalese insurance companies' financial performance and their capital structure.	Regression models are constructed to examine the impact on financial performance metrics, such as earnings per share and return on assets.	According to this study, tangibility and the debt ratio have a good effect on earnings per share, whereas the size, equity, and liquid ratio have a negative influence. The main finding of this research is that the financial performance of insurance businesses in Nepal is mostly determined by the following factors: size, liquidity, tangibility, leverage, equity to total assets ratio, and total debt ratio.
7	Bhattarai, B. P. (2020)	Effects of capital structure on financial performance of insurance companies in Nepal.	To investigate how capital structure affects Nepalese insurance companies' financial performance.	A fixed effect model, a random effect model, and a pooled OLS model were used to examine the data. Three models were used to examine the data: fixed effect, random effect, and pooled OLS.	As a consequence, it was determined that the ratio of equity to total assets, leverage, and the tangibility of assets all affected the financial performance of insurance companies in Nepal.
8	Hajisaaid, A, M, (2020)	The effect of capital structure on profitability of basic materials Saudi Arab firms.	To investigate the factors that affect NEPSE stock price, paying particular attention to private commercial banks.	Regression analysis, the fixed effect model, the random effect model, and the Housman test are the statistical methods employed.	The findings show that the return on equity (ROE) and the short-term debt to total assets (SDA) ratio are negatively correlated. There is a positive correlation between profitability and total debt (DA) and a negative correlation between the long-term debt to total assets ratio (LDA) and return on equity (ROE).
9	Bhatt, S., & Jain, S. (2020)	Capital structure and profitability of commercial banks in Nepal.	To examine the connection between Nepal's commercial banks' profitability and capital structure.	Multiple regression analysis and correlation were utilized in this study to examine the data.	According to this analysis, return on equity has an insignificantly positive relationship with long-term debt and deposits, but an insignificantly negative relationship with total debt and short-term debt. All regression models show a substantial positive relationship between profitability and bank size, meaning that the

					bigger the bank, the higher the return to shareholders.
10	Gundu, L. M. (2021)	Effect of capital structure on financial performance of quoted composite insurance companies in Nigeria.	To investigate the impact of capital structure on the 2015–2019 financial performance of Nigerian listed composite insurance firms.	Multiple regression analysis and correlation were utilized in this study to examine the data.	The study's conclusions showed a negative correlation between the firms' return on equity throughout the study period and their debt to asset ratio—a higher debt to asset ratio was associated with a lower return on equity. Additionally, there was a positive correlation found between the debt to equity ratio and return on equity, meaning that a higher debt to equity ratio corresponds to a higher return on equity.
11	Ngoc, N. M.,Tien, N. H., & Thu, T. H. (2021).	The impact of capital structure on financial performance of logistic service providers listed on Ho Chi Minh City Stock Exchange.	To assess how capital structure affects the profitability of thirty logistics companies listed in the Ho Chi Minh City Stock Exchange, as measured by ROA and ROE metrics.	Cross-sectional data from secondary sources was used in this study together with a descriptive, pooled cross-sectional research approach. The multiple regression analysis was performed in this investigation.	The findings of this study have demonstrated that capital structure negatively affects firm profitability as measured by ROA. The analysis could not find any statistical evidence to demonstrate the impact of the capital structure of logistics companies during this time period on profitability, as measured by ROE.
12	Bogamuwa, M. S. K. B., & Dharmasiri, D. P. S (2021).	Impact of capital structure on firms' profitability: evidence from listed insurance companies in Colombo stock exchange.	To ascertain how capital structure affects a company's profitability by utilizing all insurance companies listed on the Colombo Stock Exchange between 2015 and 2019.	The data in this study were analyzed using random effect panel regression.	According to this study, the ROA and ROE of listed insurance firms in Sri Lanka are negatively and statistically significantly affected by D/E and D/A.
13	Opoku-Asante, K., Winful, E. C., Sharifzadeh, M., & Neubert, M. (2022)	The relationship between capital structure and financial performance of firms in Ghana and Nigeria	To look into the relationship between capital structure and financial performance utilizing a sectorial analysis and take debt maturity into account.	Multiple regression analysis and correlation were utilized in this study to examine the data.	The empirical results revealed a strong inverse link between financial performance and capital structure. The relationship between capital structure and financial performance was unaffected by debt maturity. The industry does, however, have an impact on how capital structure and financial performance relate to one another.
14	Dodoo, R. N. A., Kumi,	The effect of capital structure on firm	To investigate how capital structure affects business	The empirical research employing the ordinary least squares (OLS)	This study showed that return on asset (ROA), a measure of a company's performance, is negatively impacted by capital

	M., & Mangudhla, T. (2023)	performance: empirical evidence from emerging economy	performance over a ten-year period (2008–2017)	regression approach and the two Step System generalized method of moment (GMM).	structure, particularly by STD and LTD. Return on equity (ROE) indicates that the capital structure (LTD and DE) has no discernible effect on the performance of the company.
15	Tran, V. H., Nguyen, D. V., Tran, M. M., & Duong, K. D. (2023)	Capital structure and profitability of listed firms and a transition market, does debt maturity matter?	To examine the relationship between debt maturity and capital structure and the profitability of businesses listed on the Vietnamese stock exchange.	Since the heteroskedasticity and autocorrelation assumptions of traditional least squares are broken, feasible generalized least squares are utilized to produce trustworthy results.	This study discovered that ROA and ROE are adversely affected by the capital structure. Furthermore, this study finds that Vietnamese enterprises' profitability is negatively impacted by their short-term debt to total assets ratio. Ultimately, this research demonstrated that the profitability and long-term debt ratio had the opposite relationship.
16	Boshnak, H. (2023).	The impact of capital structure on firm performance : Evidence from Saudi-listed firms.	To look at how capital structure affects the performance of companies that are listed on the Tadawul, the Saudi Stock Exchange.	To facilitate hypothesis testing, models are estimated using the generalized method of moments (GMM) estimation technique.	The findings showed that while long-term debt, total debt, and debt to equity had an impact on firm financial performance (return on equity) and market performance (in terms of Tobin's Q), short-term debt, long-term debt, and debt-to-equity ratios all had a significant negative impact on the firm's operational performance (return on assets).

2.2.2 Review of Thesis

Shrestha (2016) analyzed the capital structure of selected and listed companies. This study assessed the degree of leverage held by a chosen group of businesses and calculate how capital structure affects profitability. After doing a financial and statistical study, some conclusions can be made. Initially, it is discovered that the majority of these businesses have much more loan capital than equity capital. As a result, the majority of them are losing so much money that they are having major problems paying their loan's interest. After loan interest is charged, the majority of the losses occur. In the meantime, the company's poor performance is indicated by the computation of its leverage position, which is rising. Ultimately, it is discovered that various ratio evaluations demonstrate the corporations' ineffective capital structure management.

Pokhrel (2017) studied impact of capital structure on profitability of commercial banks. The main objective of this study was to determine how capital structure affects Nepal's commercial banks' profitability. Data spanning five years are used as sample years, and various analytical techniques such as descriptive analysis, regression analysis, and correlation analysis are applied. The debt to equity ratio, debt ratio, and business size do not statistically significantly affect GIBL's return on assets (ROA). Subsequently, the outcome demonstrates that both the debt to equity ratio and the debt ratio lower EBL's ROA. It is intended that these independent factors have a negligible influence on ROA and have a negative connection with one another. It's interesting to note that these research have demonstrated a negligible impact and a negative association between the debt ratio and ROE of both banks. Nonetheless, the debt to equity ratio and ROE, as well as the log size and ROE of both banks, have a positive correlation with negligible effects. This suggests that the sample banks' profitability is not impacted by the general debt to equity ratio, which means that issues influencing capital structure must be carefully watched.

Giri (2018) examined the comparative position in capital structure between EBL and EBL. The primary aim of the research was to examine the connection between total capital and debt, as well as the significance and correlation between different capital structure ratios. A few significant conclusions from the financial and statistical analysis in this study include that EBL maintains an ideal capital structure in comparison to EBL because of its higher value and lower capitalization rate. In contrast to EBL, EBL has the ideal capital structure. Additionally, it can be said that EBL has a high financial risk due to its usage of long-term debt; conversely, EBL has a lower financial risk due to its use of less long-term debt.

Khadka (2019) examined the effect of capital structure on profitability of financial firms listed at Nepalese stock exchange. The impact of capital structure on financial performance in respect to these variables was examined in this study. Data was gathered for the study's aforementioned goals through an examination of papers, company annual reports, and reports from the Nepal Stock Stock Exchange. Statistical Packages for Social Sciences (SPSS) was used to analyze the data and provide a descriptive analysis. The findings of the debt and return on equity regressions in the research demonstrated an adverse relationship between capital structure and

performance. The findings demonstrated that Nepal's listed financial institutions rely more on debt than equity capital. This has brought attention to the fact that banks are very leveraged businesses. It was discovered that there was a negative correlation between interest and debt to equity in the co-efficient values. This indicates that as debt financing levels rise, interest payments rise as well, leading to a drop in profitability.

Gaire (2020) aimed to identify the position of capital structure of Nepal SBI Bank Limited and Everest Bank Limited. This study attempts to evaluate the trend of long-term debt, equity, and net profit of NSBL and EBL in addition to analyzing the link between long-term debt and net profit, equity, and net profit of specific banks. As can be seen from the outcome, EBL has been successful in using debt to acquire more lucrative assets, whereas NSBL has a higher level of leverage than EBL. It is intended to imply that EBL outperforms NSBL in terms of capital adequacy and investor fund contributions. This study also discovered that, with the exception of NSBL's long-term debt and net profit, EBL and NSBL exhibit good synchronization between their long-term debt and net profit, short-term debt and net profit, and debt and equity of both banks are significant. Moreover, this study found the trend analysis forecast the increasing rate of long term debt, equity and net profit of both banks.

Bhandari (2021) examined the effect of capital structure on profitability of insurance companies in Nepal. The impact of capital structure on Nepali insurance companies' profitability. The impact of capital structure on the profitability of Nepali insurance businesses that are listed was investigated in this study. The statistical association between capital structure ratios and profitability was estimated using regression analysis. The examination revealed a statistically significant and favorable correlation between the capital structure of insurance companies and their financial success. The result also demonstrated how lucrative insurance companies rely more on debt. Additionally, a favorable and statistically significant correlation between firm size and financial performance is shown by the results.

Joshi (2022) examined a comparative study of capital structure management between Kumari Bank Ltd. and Siddhartha Bank Ltd. Determining how two banks compared

in terms of capital structure was the study's primary goal. Second, the cost of the various sources of capital was also examined in this study. In a similar vein, this research emphasizes the connection between operational profit and interest costs in order to gauge the banks' ability to pay debt. Studying capital structure and sufficiency ratio, as well as analyzing return on capital in proportion to capital utilized, were the study's additional goals. Regarding this, it was discovered that during the course of the research period, both banks' shareholder equity has been trending upward. In addition, KBL's higher total capitalization rate meant that it could better leverage the firm's assets than SBL could. Additionally, it was discovered that KBL could make better use of its long-term capital. Furthermore, it was discovered that both banks' debt-to-equity ratios significantly contributed to higher returns on equity.

Bhatta (2023) analyzed capital structure and profitability of manufacturing and hydro companies in Nepal. The purpose of this research was to study This study looked at the link between listed industrial and hydropower businesses' profitability and capital structure in Nepal. In a sense, the sample of five listed manufacturing and five listed hydropower enterprises serves as the starting point for the current study on capital structure and profitability. The performance of the company was measured by net profit margin, return on equity, and return on assets; the capital structure was measured by the ratio of total debt to total equity and total debt to total assets. The approach of judgmental sampling was applied. Regression analysis, correlation, and descriptive statistics are among the statistical tests that were performed. The outcome demonstrated that the hydropower firms, AVHCL and BPCL, had solid capital structure and profitability, as did the manufacturing companies, UNL, SHIVAM, and HDL. Profitability and capital structure have a weak and negative correlation.

2.3 Research Gap

Research gap refers to the gap between previous research and this research. First, there is research gap between the present study and previous studies in time period. They had studied on old periods but this study has included up to 2021/22. Then, previous studies also used a small duration of a maximum of five years but this study has covered ten years. Besides it, there was limited and inclusive findings in the

previous studies on the effect capital structure affects profitability of insurcance companies. That's why, this study tries to explore different explanatory variables such as debt ratio, debt to equity ratio and size of company and dependent variables, profitability (return on assets and return on equity) to analyze the impact of capital structure on profitability of insurance companies in Nepal. This study attempted to use the t-test and the multicollinearity test in addition to using descriptive, correlation, and multiple regression analyses that were not examined for data analysis. Moreover, this study has taken three insurance companies which are Himalayan General Insurance Company Limited, Sikhar Insurance Company Limited and Everest Insurance Company Limited since those insurance compapnies were not included by the preivious researchers. That's why, this study tries to fulfill the study gap to large extent.

CHAPTER- III
RESEACH METHODOLOGY

Research methodology is the disciplined process of addressing a problem by the systematic collection, documentation, analysis, interpretation, and reporting of data pertaining to the various facets of a phenomenon being studied. The research methodology for this paper describes the steps and techniques employed in each phase of the investigation. The four components are the study design, the analytic approach, the type and sources of data, and the population and sample.

3.1 Research Design

A research design is the configuration of parameters for data collection and analysis with the goal of balancing procedural economy and relevance to the research question. To put it another way, a research design is a framework and strategy plan that is created with the intention of answering research questions and managing deviations. Research designs that were both descriptive and causal were used to accomplish the study's unique goals. The capital structure and profitability of the sample insurance companies were examined using descriptive research, which also yielded insights into the companies' existing positions through the use of metrics like average values, standard deviations, maximums, and minimums that characterize the facts. The study employed a causal research design to investigate the influence of capital structure on the profitability of the insurance companies under investigation.

3.2 Populations and Sample, and Sampling Design

Currently, the number of insurance companies is rapidly increasing, with a total of 35 insurance companies operating in Nepal as of March 2023. This study considers all these companies as the population. Three companies i.e. Himalayan General Insurance Company Limited, Sikhar Insurance Company Limited, and Everest Insurance Company Limited were selected as the sample using purposive sampling. These companies were chosen because they are the top three in terms of profitability and have readily available data.

3.3 Nature and Sources of Data, and Instruments of Data Collection

In this study, only secondary data were utilised. The connected bank's websites and annual reports provided the information. Secondary data are those that, in the form of statistics, are made publicly available to others after having previously been used or collected by another entity. Consequently, the primary sources and types of data are published materials such as insurance company annual reports, a large number of theses that are pertinent to this topic, NRB reports, books, journals, and articles, among others.

3.4 Method of Analysis

Arithmetic Mean

The simple mean, or arithmetic mean, of a set of data is calculated by dividing the total number of observations by the sum of all the observations. The arithmetic mean of a variable is the best value that represents the group as a whole. Arithmetic mean of a series is given by:

$$\text{Mean } (\bar{X}) = \frac{\Sigma X}{n}$$

Where,

$\bar{X}$ = denotes arithmetic mean, n denotes the no. of periods and x_1, x_2 …… x are the individual observations.

Standard Deviation

The positive square root of the mean squared of the departure from the arithmetic mean is the definition of the standard deviation. It displays the ranges and magnitudes of deviations from the mean or center. It gauges the dispersion in absolute terms. The variability will increase with a greater standard deviation and vice versa. Dispersion quantifies how far the data deviate from the center value. In other words, it helps to analyze the quality of data regarding its variability. It is calculated as:

$$\text{Standard Deviation (SD)} = \sqrt{\frac{\Sigma(X - \bar{X})^2}{n}}$$

Co-efficient of Variation

In absolute terms, the dispersion is represented by the standard deviation. The relative measure of dispersal based on standard deviation is determined by measuring the coefficient of standard deviation. The percentage measure of the coefficient of variation is called the coefficient of so. Less CVs but greater uniformity and homogeneity, and vice versa. The CV may compare two sets of variables independently based on how variable they are, which makes the standard deviation unsuitable for comparing two sets of data. It is computed as follows:

$$\text{Coefficient of Variation (C.V.)} = \frac{\sigma}{\bar{X}} \times 100$$

Coefficient of Correlation

The correlation coefficient describes the link between the independent and dependent variables. It is a method for determining the relationship between these two variables. When there is a substantial correlation between the two variables—that is, when changes in the value of the independent variable also have an impact on the value of the dependent variable—there is a correlation coefficient.

$$\text{Correlation Coefficient (r)} = \frac{n\Sigma XY - \Sigma X\Sigma Y}{\sqrt{n\Sigma X^2 - (\Sigma X)^2}\sqrt{n\Sigma Y^2 - (\Sigma Y)^2}}$$

Regression Analysis

Regression analysis is a collection of statistical procedures used in statistical modeling to estimate the relationships between variables. When examining the link between a dependent variable (ROA and ROE) and one or more independent variables (debt ratio, debt to equity ratio, and firm size), it encompasses a variety of modeling and analysis methodologies. More precisely, regression analysis clarifies how, when any one of the independent variables is changed while the other independent variables are kept constant, the usual value of the dependent variable also known as the "criterion variable" changes.

Model Specification

The model is simple linear regression function that links the ratio of capital structure and profitability variables. The general regression equation is of the form:

Model 1

In this model, ROA is dependent variable whose value is affected by the value of other independent variables.

$ROA = \alpha + \beta_1 DR + \beta_2 DER + \beta_3 Size$

Where,

DR = Debt Ratio

DER = Debt equity Ratio

Size = Size (Total Assets)

α = Constant

β = Parameters of the Net Profit

Model 2

In this model, ROE is dependent variable whose value is affected by the value of other independent variables.

$ROE = \alpha + \beta_1 DR + \beta_2 DER + \beta_3 Size$

Where,

DR = Debt Ratio

DER = Debt equity Ratio

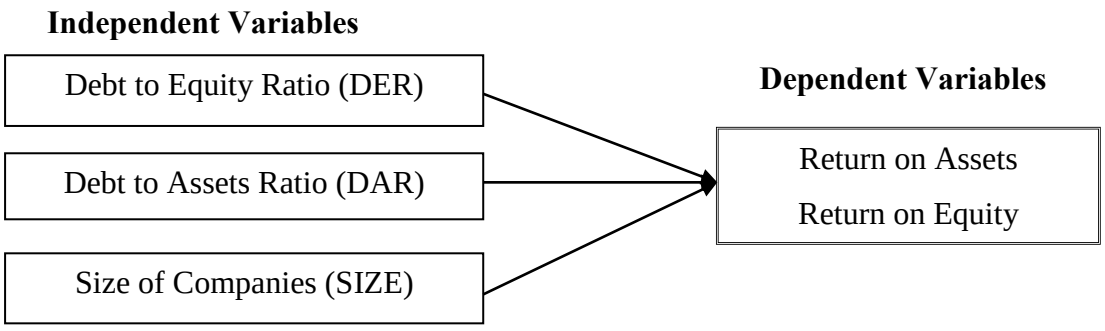
Size = Size (Total Assets)

α = Constant

β = Parameters of the Net Profit

3.5 Research Framework and Definition of Variables

The researcher develops the following conceptual framework for the study based on reviews of the theoretical and empirical literature.



(Source: Jaishi 2020; Bhattarai, 2020)

Figure 1 Research Framework

Debt to Equity (D/E) ratio

It shows the percentage of long-term debt financing a company's equity. It's a debt ratio meant to gauge the financial leverage of an organization. It shows the ratio of a company's debt to equity held by shareholders in relation to the amount of debt used to fund its assets. The most common usage for it is to determine how much a business is utilizing debt as a leverage tactic (trying to raise its value by using borrowed money to fund various projects). A greater debt-to-equity ratio indicates that the business has been using debt to fund its expansion aggressively. Excessive risk is frequently linked to aggressive leveraging strategies. This may result in volatile earnings as a result of the additional interest expense.

$$\text{Debt-equity ratio} = \frac{\text{Total Debt}}{\text{Total Shareholder's equtiy}}$$

Debt to Asset (D/A) ratio

It is the percentage of long-term debt used to finance an organization's assets. An organization is more leveraged and therefore at more risk financially if its debt to asset ratio is higher. Better financial performance with less or moderate reliance on debt is indicated by a smaller debt to asset ratio, whereas a larger ratio shows a greater reliance on debt. Businesses with greater debt-to-asset ratios need to keep up a steady flow of income in order to cover their costs.

$$\text{Debt-total assets ratio} = \frac{\text{Total Debt}}{\text{Total assets}}$$

Firm Size (Size)

One control variable that may have had an impact on a business's worth that was not determined by the leverage of the firm is its size. The proxy for the firm's size was the logarithm of total assets.

Firm size (Size) = Log of total asset

Return on Asset (ROA)

A financial ratio called return on asset (ROA) indicates the percentage of profit an organization makes in comparison to its total resources. ROA provides a solution to the query: what can you accomplish with the resources at your disposal? The management is better when the ROA is higher. Managers, investors, or analysts might

use return on assets (ROA) to gauge how effectively a company's management is generating profits from its assets.

$$\text{Return on Asset (ROA)} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

Return on Equity (ROE)

The amount of net income returned as a proportion of shareholder equity is known as return on equity. It assesses a company's profitability by disclosing the amount of profit it makes on the capital that shareholders have contributed. In order to investigate the link between the factors employed in this study and the amount of profit a firm produces with each cedi of shareholders' equity, we will look at the insurance company of Nepal.

$$\text{Return on Equity (ROE)} = \frac{\text{Net Profit After tax}}{\text{Total Equity}}$$

CHAPTER - IV
RESULTS AND DISCUSION

As outlined in previous chapters, the primary objective of this study is to investigate the impact of capital structure on the profitability of insurance companies in Nepal. This chapter focuses on presenting and analyzing the findings, and it is divided into three sections. The first section provides descriptive and correlation analyses of the study variables. The second section addresses the fulfillment of linear regression model assumptions. The third section presents the results of the regression analysis. For additional statistical analysis, the ratio of the designated dependent and independent variables as well as the ratio scale measurement were computed using data analysis techniques. The statistical analysis of the gathered data was conducted with the assistance of SPSS version 26.

4.1 Results

4.1.1 Descriptive Statistics of Variables

Table 2 presents the descriptive statistics for the variables used in the study. The results display the minimum and maximum values for profitability indicators, such as Return on Equity (ROE) and Return on Assets (ROA), as well as other independent variables related to insurance companies in Nepal.

Table 2

Descriptive Statistics of Variable of Insurance Companies

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Independent Variables:					
DER	30	0.35	3.25	1.0757	0.73953
DAR	30	25.71	76.50	46.9447	14.98242
LSIZE	30	5.85	6.81	6.2930	0.28024
Dependent Variables:					
ROA	30	0.36	11.79	7.0293	2.57844
ROE	30	0.49	35.16	15.0780	7.80878

Source: Appendix –II

Table 2 presents the descriptive statistics for both dependent and independent variables used in the study. For the first independent variable, the debt-to-equity ratio, the average is 1.0757, with a standard deviation of 0.73953. The ratio ranges from a minimum of 0.35% to a maximum of 3.25%. For the second independent variable, the

debt-to-assets ratio, it ranges from a minimum of 22.71% to a maximum of 76.50%, with an average of 46.9447% and a standard deviation of 14.98242. The statistics for the last independent variable, company size, show a range from a minimum of 5.85 to a maximum of 6.81, with an average of 6.2930 and a standard deviation of 0.28024. For Return on Assets (ROA), the average over the study period is 7.0293%, with a standard deviation of 2.57844%. The ROA ranges from a minimum of 0.36% to a maximum of 11.79%. ROA measures how efficiently insurance companies use their assets to generate profit, calculated as profit before interest and tax divided by total assets. Return on Equity (ROE) has a mean of 15.0780%, with a range from 0.49% to 35.16%. This range is considered satisfactory as it falls between 15% and 25%, with a low standard deviation of 7.80878, indicating relatively consistent performance across the sample.

4.1.2 Correlation Analysis

A correlation matrix is a table that shows the correlation coefficients between variables. Each table cell shows the correlation between two matched variables. A correlation matrix is a useful tool for summarizing data. This provides us with a brief summary of the variables that exhibit varying degrees of importance and correlation. The absence of a linear relationship between the two variables is indicated by a correlation value of 0. A perfect positive relationship is represented by a correlation coefficient of +1, and a perfect negative relationship is represented by a correlation coefficient of -1. The correlation matrix is shown as follows in Table 3.

Table 3

Pearson Correlation Coefficients of Study Variables

	DER	DAR	LSIZE	ROA	ROE
DER	1				
DAR	.947**	1			
LSIZE	-.637**	-.667**	1		
ROA	.264	.417*	-.051	1	
ROE	.812**	.858**	-.430*	.759**	1

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

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Appendix-III

Table 3 displays the results of the correlation test between both dependent and independent variables, using a correlation coefficient matrix. The findings indicate

that the Debt-to-Equity Ratio (DER) has an insignificant positive correlation with Return on Assets (ROA), with a correlation coefficient of 0.264 at the 5 percent significance level. However, DER shows a significant positive relationship with Return on Equity (ROE). Additionally, the Debt-to-Total Assets Ratio demonstrates a significant positive correlation with both ROA and ROE. In contrast, the size of the companies shows an insignificant negative correlation with ROA, but a significant negative correlation with ROE for the insurance companies.

4.1.3 Regression Analysis

It encompasses various techniques for modeling and analyzing multiple variables, specifically focusing on the relationship between dependent variables (ROA and ROE) and independent variables (debt-to-total-assets ratio, debt-to-equity ratio, and company size). Ordinary Least Squares (OLS) regression, applied to panel data, is utilized as the primary analytical tool.

4.1.3.1 Analysis of Return on Assets Regression

ROA is the dependent variable and independent variables are debt to total assets ratio, debt to equity ratio and size of companies to analyze the effect of capital structure on profitability of insurance companies.

Table 4

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.653[a]	.427	.361	2.06192

a. Predictors: (Constant), LSIZE, DER, DAR

Source: Appendix-IV

The coefficient of determination, R^2, in multiple regression analysis is a summary measure that indicates how well the sample regression line fits the data. In other words, R^2 represents the proportion of the variance in the dependent variable that is explained by the independent variables. In this case, the model accounts for 42.70% of the variance in the dependent variable, ROA. The strength of the relationship between the variables, as indicated by the multiple correlation coefficient (R), is 0.653, suggesting a strong relationship between the study variables. This implies that

ROA is significantly influenced by the independent variables. Additionally, the standard error of estimate is closely related to the regression analysis, providing an indication of the precision of the estimated regression coefficients.

Table 5

Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82.262	3	27.421	6.450	.002[b]
	Residual	110.540	26	4.252		
	Total	192.802	29			

a. Dependent Variable: ROA
b. Predictors: (Constant), LSIZE, DER, DAR

Source: Appendix-IV

An analysis using ANOVA (F-value) suggests that the influence of dependent variables may be explained by the greatest number of potential combinations of predictor variables. Findings indicate that the ROA indicator has a major influence. As a proxy for ROA, the F-values of 6.450 ($p = 0.002 < 0.05$) for LSIZE, DER, and DAR indicate a strong correlation between the dependent variable (ROA) and the independent variables.

Table 6

Regression Coefficient of Independent Variables with ROA

Variables	Coefficients	t-statistics	p-value
(Constant)	-26.156	-2.050	.051
DER	-4.330	-2.693	.012
DAR	0.319	3.893	.001
LSIZE	3.631	1.980	.058

Source: Appendix-IV

Table 6 presents the regression coefficient of independent variables debt to total assets ratio, debt to equity ratio and size of companies and the intercept value of dependent variable ROA. The regression results show that the Debt-to-Equity Ratio (DER) has a negative relationship with Return on Assets (ROA), with a coefficient estimate of -4.330. This implies that, holding other independent variables constant, a one-unit increase in DER results in a decrease in ROA by 4.330%. The p-value for DER is 0.012, indicating that this relationship is statistically significant at the 5% level.

Therefore, the results support the hypothesis that DER significantly affects the ROA of insurance companies.

The regression model results reveal a positive relationship between the Debt-to-Assets Ratio (DAR) and Return on Assets (ROA), with a coefficient estimate of 0.319. This indicates that, holding other independent variables constant, a 1% increase in DAR leads to a 0.319% increase in ROA for insurance companies. The p-value for DAR is 0.001, demonstrating that this relationship is statistically significant at the 5 percent level.

The regression results indicate a positive relationship between the size of companies (LSIZE) and Return on Assets (ROA), with a coefficient estimate of 3.631. This suggests that, holding other independent variables constant, a 1% increase in the size of companies leads to a 3.631% increase in ROA for insurance companies. However, the p-value for LSIZE is 0.058, which is just above the 5% significance level, indicating that this relationship is statistically insignificant. Therefore, the size of companies does not have a significant impact on ROA for insurance companies in Nepal.

4.1.3.2 Analysis of Return on Equity Regression

ROE is the dependent variable and independent variables are debt to total assets ratio, debt to equity ratio and size of companies to analyze the effect of capital structure on profitability of insurance companies.

Table 7

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.879[a]	.773	.747	3.92956

a. Predictors: (Constant), LSIZE, DER, DAR

Source: Appendix-V

An overview metric that indicates how well the sample regression line fits the data is the coefficient of determination (R2) in multiple regression. In this instance, 77.30 percent of the variation in the dependent variable, ROE, is explained by the model. The value of the R statistic determines the strength of the association between the

variables (multiple correlation coefficients). The study's R score of 0.879 suggests a strong correlation between the variables under investigation. This suggests that the independent factors had a significant impact on the ROE. Regression analysis is perfectly correlated with standard error of estimate.

Table 8

Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1366.857	3	455.619	29.506	.000[b]
	Residual	401.478	26	15.441		
	Total	1768.335	29			

a. Dependent Variable: ROE
b. Predictors: (Constant), LSIZE, DER, DAR

Source: Appendix-V

An analysis using ANOVA (F-value) suggests that the impact of dependent variables can be explained by the greatest number of potential combinations of predictor variables. Findings indicate that the ROE indicator has a major impact. As a proxy for ROE, the F-values of 29.506 ($p = 0.000 < 0.05$) for LSIZE, DER, and DAR indicate a strong correlation between the dependent variable (ROE) and the independent variables.

Table 9

Regression Coefficient of Independent Variables with ROE

Variables	Coefficients	t-statistics	p-value
(Constant)	-54.825	-2.255	.033
DER	0.127	.041	.967
DAR	0.530	3.391	.002
LSIZE	7.130	2.040	.052

Source: Appendix-V

Table 9 presents the regression coefficient of independent variables debt to total assets ratio, debt to equity ratio and size of companines and the intercept value of dependent variable ROE. The regression results show that the Debt-to-Equity Ratio (DER) has a positive relationship with Return on Equity (ROE), with a coefficient estimate of 0.127. This indicates that, holding other independent variables constant, a one-unit increase in DER results in a 0.127% increase in ROE for insurance companies. However, the p-value for DER is 0.967, which is much higher than the 5%

significance level, indicating that this relationship is statistically insignificant. Therefore, the results do not support the hypothesis that DER significantly affects ROE in insurance companies.

The regression results reveal a positive relationship between the Debt-to-Assets Ratio (DAR) and Return on Equity (ROE), with a coefficient estimate of 0.530. This implies that, holding other independent variables constant, a 1% increase in DAR results in a 0.530% increase in ROE for insurance companies. The p-value for DAR is 0.002, indicating that this relationship is statistically significant at the 5% level. Thus, DAR significantly impacts ROE in insurance companies.

The regression results indicate a positive relationship between the size of companies (LSIZE) and Return on Equity (ROE), with a coefficient estimate of 7.130. This suggests that, holding other independent variables constant, a 1% increase in the size of companies leads to a 7.130% increase in ROE for insurance companies. However, the p-value for LSIZE is 0.052, which is slightly above the 5% significance level, indicating that this relationship is statistically insignificant. Therefore, the size of companies does not have a significant impact on ROE for insurance companies in Nepal.

4.2 Discussion

The primary goal of this study is to analyze how capital structure affects the profitability of insurance companies. Specifically, it examines the influence of capital structure on return on assets (ROA) and return on equity (ROE), which are the key metrics for assessing profitability in Nepalese insurance companies. The correlation analysis reveals that the debt-to-equity ratio (DER) has an insignificant positive relationship with ROA at a 5 percent level of significance. This result aligns with the findings of Bhattarai (2020). This result is also consistent with the finding of Dodoo, Kumi, and Mangudhla (2023), which indicated a positive relationship between the debt-to-equity ratio and ROA. Additionally, the debt-to-equity ratio shows a significant positive relationship with ROE, aligning with the results of Gundu (2021). However, this finding contrasts with Dodoo, Kumi, and Mangudhla (2023), who reported a negative relationship between the debt-to-equity ratio and ROE. There is a significant positive correlation between the debt-to-total-assets ratio and ROA, which

aligns with the findings of Bhattarai (2020) and Jaishi (2020). However, this result contrasts with the findings of Tran et al. (2023). Additionally, the debt-to-total-assets ratio also shows a significant positive relationship with ROE. This is consistent with Bhatt and Jain (2020), who observed a positive relationship between the debt-to-assets ratio and ROE, but it contradicts the findings of Tran et al. (2023).

Furthermore, the size of companies shows an insignificant negative relationship with ROA, which is consistent with the findings of Bhattarai (2020), Jaishi (2020), and Tran et al. (2023). This result contrasts with the findings of Dodoo, Kumi, and Mangudhla (2023). Conversely, the size of companies exhibits a significant negative relationship with ROE, aligning with the results of Dodoo, Kumi, and Mangudhla (2023). However, this finding differs from the results of Bhatt and Jain (2020) and Tran et al. (2023), who reported a positive relationship between company size and ROE.

The multiple regression analysis found that debt to equity ratio (DER) has significant effect on ROA of insurance companies which is concsitent with the finding of Boshnak (2023) but it is not consistent with the finding of Bhattarai (2020); Dodoo, Kumi and Mangudhla (2023). The debt-to-assets ratio (DAR) has a significant positive impact on ROA at the 5 percent level of significance, which aligns with the findings of Bhattarai (2020) and Jaishi (2020), but contrasts with the studies of Opoku-Asante, Winful, Sharifzadeh, and Neubert (2022) and Tran et al. (2023). Additionally, the size of companies shows an insignificant positive impact on ROA for insurance companies in Nepal, consistent with the findings of Bhattarai (2020) and Dodoo, Kumi, and Mangudhla (2023), but differing from the results of Jaishi (2020) and Tran et al. (2023).

In the regression analysis of ROE, the debt-to-equity ratio (DER) has an insignificant positive effect on ROE for insurance companies. This result is consistent with Gundu (2021), who found a positive effect of DER on ROE, but it contrasts with the findings of Dodoo, Kumi, and Mangudhla (2023) and Boshnak (2023). On the other hand, the debt-to-assets ratio (DAR) has a statistically significant positive impact on ROE at the 5 percent level of significance, which aligns with Bhatt and Jain (2020). However, this finding is contrary to the results reported by Gundu (2021) and Tran et al. (2023).

The regression results indicate that the size of companies has an insignificant positive impact on ROE for insurance companies in Nepal. This finding is consistent with Bhatt and Jain (2020), but it contrasts with the findings of Tran et al. (2023) and Dodoo, Kumi, and Mangudhla (2023).

CHAPTER – V
SUMMARY AND CONCLUSION

5.1 Summary

Insurance businesses must make critical decisions about their capital structure in order to optimize shareholder value since these decisions should have an impact on the companies' capacity to compete. Selecting the best mix of debt and equity to maximize value while lowering financing costs is a crucial decision for today's business managers. Without a question, the financial sector contributes significantly to the economic growth of every nation. As a result, corporate success is essential to a country's overall financial stability as well as to maximizing value for its owners. To attain an ideal capital structure, insurance companies must select and modify their strategic financing mix to optimize value and make sure their operations are not excessively geared or undergeared. Since achieving value maximization and risk minimization is not unique to Nepalese insurance businesses, the focus of this study is on determining how capital structure and profitability are related.

The primary goal of this study is to examine how capital structure affects profitability in insurance companies in Nepal. The study aims to evaluate the current capital structure of chosen insurance companies, assess the relationship between various capital structure factors and the profitability of these companies, and determine how debt ratio, debt-to-equity ratio, and firm size influence their profitability. Additionally, relevant journals, articles, and websites are consulted for this research. To meet the study's specific objectives, both descriptive and causal research designs have been employed. The descriptive design focuses on analyzing the current state of capital structure and profitability, while the causal research design assesses how capital structure impacts the profitability of insurance companies in Nepal. From the total population of thirty-five insurance companies in Nepal, three companies have been selected as a sample using purposive sampling. These three were chosen because they are the top three in terms of profitability at present. The study relies on secondary data sourced from annual reports and other publications. This data has been gathered primarily from the loan department and annual reports of the insurance companies, covering a period of ten years from the fiscal year 2012/13 to 2021/22. Descriptive analysis, correlation analysis, and multiple regression analysis are conducted using

SPSS version 26. In this study, Return on Assets (ROA) and Return on Equity (ROE) are used as dependent variables, while the debt-to-equity ratio, debt-to-total-assets ratio, and company size serve as explanatory variables.

The study shows that insurance companies significantly contribute to investor funds and maintain a strong capital adequacy position, largely due to their high debt-to-equity ratios. Additionally, it reveals that these companies rely more on financing from insurers compared to their owners, which introduces risks associated with high leverage or debt-equity ratios. Profitability, as a measure of efficiency, is high in these companies, as indicated by their elevated Return on Assets (ROA) and Return on Equity (ROE). This suggests efficient utilization of assets, leading to higher returns for investors and strong overall company performance. The correlation analysis indicates that the debt-to-equity ratio (DER) has an insignificant positive relationship with Return on Assets (ROA), but it shows a significant positive relationship with Return on Equity (ROE). Additionally, the debt-to-total-assets ratio is significantly positively correlated with both ROA and ROE. In contrast, the size of the companies exhibits an insignificant negative relationship with ROA and a significant negative relationship with ROE. The regression results reveal that the debt-to-equity ratio significantly negatively impacts Return on Assets (ROA) but has an insignificant positive effect on Return on Equity (ROE) for insurance companies. In contrast, the debt-to-assets ratio significantly positively influences both ROA and ROE. Additionally, the size of the companies has an insignificant positive impact on profitability, as measured by ROA and ROE, among insurance companies in Nepal.

5.2 Conclusion

Based on the research study, several conclusions have been drawn. The study concludes that insurance companies are successful in leveraging debt to enhance profitability due to their high debt-to-assets ratio, and owners of these companies tend to prefer higher debt levels. This indicates that insurance companies make significant contributions to investor funds and maintain a strong capital adequacy position. Additionally, the study finds that these companies rely heavily on financing from insurers rather than owners, which introduces risks associated with high leverage or debt-to-equity ratios. Profitability serves as a measure of efficiency, reflecting the extent to which a company achieves its desired profit. It provides an overview of

overall company performance. High values of Return on Assets (ROA) and Return on Equity (ROE) in insurance companies indicate effective utilization of their assets. This suggests that investors are receiving higher returns on their investments and that the companies are performing well.

The correlation analysis reveals that the debt-to-equity ratio (DER) has an insignificant positive relationship with Return on Assets (ROA), while it shows a significant positive relationship with Return on Equity (ROE). Additionally, the debt-to-total-assets ratio is significantly positively correlated with both ROA and ROE. On the other hand, company size exhibits an insignificant negative relationship with ROA but has a significant negative relationship with ROE among insurance companies.

The regression results indicate that the debt-to-equity ratio significantly negatively affects Return on Assets (ROA) but has an insignificant positive effect on Return on Equity (ROE) for insurance companies. Conversely, the debt-to-assets ratio has a significant positive impact on both ROA and ROE, enhancing profitability. Additionally, the size of the companies has an insignificant positive impact on profitability, as measured by both ROA and ROE, among insurance companies in Nepal.

5.3 Implications

The investigation has resulted in the following conclusions regarding how to enhance the impact of capital structure on the profitability of Nepalese insurance companies.

- The study discovered that both the debt-to-equity ratio and the debt-to-assets ratio significantly affect the profitability of insurance companies in Nepal. Consequently, the findings are anticipated to offer additional and useful insights into how capital structure influences profitability. s a result, it signals to policymakers and insurance company management to make every financial decision feasible.
- This research provides some of the latest information, statistics, and insights on capital structure and profitability. Consequently, it is likely to be of significant interest to insurers and shareholders.

- The study's conclusions are beneficial to investors and future researchers. This paper is a valuable resource for future researchers.
- The study recommends conducting further research on this topic over a period exceeding ten years, using a sample that includes more than three insurance companies and other financial institutions such as commercial banks, finance companies, development banks, and microfinance companies. Properly executed, this approach could provide more robust results for informing policy implementation. Additionally, this study only investigated three independent variables: the debt-to-equity ratio, enterprise size, and the debt-to-assets ratio. To gain a more comprehensive understanding, future research should incorporate other relevant factors such as the liquidity ratio, long-term debt-to-equity ratio, equity-to-total-assets ratio, tangible assets, and macroeconomic variables like GDP growth rate and inflation rate.

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APPENDICES

APPENDIX – I

Raw Data of Sample Insurance Companies

Co.	Year	DER	DAR	SIZE	ROA	ROE
HGICL	2012/13	3.25	76.50	876918	8.26	35.16
	2013/14	1.56	60.97	1158217	8.06	20.65
	2014/15	2.07	67.43	1774232	7.99	24.52
	2015/16	0.96	48.85	1377378	9.50	18.58
	2016/17	1.07	51.59	1585978	7.68	15.86
	2017/18	0.55	35.64	2470329	5.74	8.92
	2018/19	0.55	35.63	2722523	7.43	11.54
	2019/20	0.56	36.04	2943299	5.90	9.22
	2020/21	0.35	25.82	2676493	4.13	5.57
	2021/22	0.49	33.00	3154571	4.17	6.22
SICL	2012/13	2.20	68.78	1165185	7.08	22.66
	2013/14	1.35	57.41	1376836	9.52	22.36
	2014/15	1.33	57.10	1862659	11.79	27.48
	2015/16	0.87	46.50	2661597	11.52	21.53
	2016/17	0.94	48.45	3439003	10.47	20.31
	2017/18	0.96	48.97	4256961	9.38	18.38
	2018/19	0.84	45.58	4728740	8.49	15.60
	2019/20	0.71	41.51	5062113	8.05	13.77
	2020/21	0.46	31.71	5396416	5.77	8.45
	2021/22	0.44	30.53	6523453	4.22	6.07
EICL	2012/13	2.76	73.39	898892	5.72	21.48
	2013/14	1.85	64.92	759079	6.51	18.55
	2014/15	1.70	63.00	770816	5.60	15.14
	2015/16	1.06	51.57	708473	8.89	18.35
	2016/17	0.94	48.39	874933	5.39	10.44
	2017/18	0.88	46.87	948292	5.79	10.91
	2018/19	0.46	31.43	2020881	1.98	2.89
	2019/20	0.39	28.10	2367371	8.56	11.91
	2020/21	0.35	25.71	2519875	6.93	9.33
	2021/22	0.37	26.95	2570515	0.36	0.49

(Source: Annual Report of Sample Non-life Insurance Companies)

APPENDIX -II

Descriptive Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
DER	30	.35	3.25	1.0757	.73953
DAR	30	25.71	76.50	46.9447	14.98242
LSIZE	30	5.85	6.81	6.2930	.28024
ROA	30	.36	11.79	7.0293	2.57844
ROE	30	.49	35.16	15.0780	7.80878
Valid N (listwise)	30				

Source: SPSS version 26

APPENDIX -III

Pearson Correlation Coefficients

		DER	DAR	LSIZE	ROA	ROE
DER	Pearson Correlation	1	.947**	-.637**	.264	.812**
	Sig. (2-tailed)		.000	.000	.159	.000
	N	30	30	30	30	30
DAR	Pearson Correlation	.947**	1	-.667**	.417*	.858**
	Sig. (2-tailed)	.000		.000	.022	.000
	N	30	30	30	30	30
LSIZE	Pearson Correlation	-.637**	-.667**	1	-.051	-.430*
	Sig. (2-tailed)	.000	.000		.789	.018
	N	30	30	30	30	30
ROA	Pearson Correlation	.264	.417*	-.051	1	.759**
	Sig. (2-tailed)	.159	.022	.789		.000
	N	30	30	30	30	30
ROE	Pearson Correlation	.812**	.858**	-.430*	.759**	1
	Sig. (2-tailed)	.000	.000	.018	.000	
	N	30	30	30	30	30

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

*. Correlation is significant at the 0.05 level (2-tailed).

Source: SPSS version 26

APPENDIX -IV

Multiple Regression Analysis of Sample Banks (On ROA)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.653[a]	.427	.361	2.06192

a. Predictors: (Constant), LSIZE, DER, DAR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82.262	3	27.421	6.450	.002[b]
	Residual	110.540	26	4.252		
	Total	192.802	29			

a. Dependent Variable: ROA

b. Predictors: (Constant), LSIZE, DER, DAR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-26.156	12.756		-2.050	.051
	DER	-4.330	1.608	-1.242	-2.693	.012
	DAR	.319	.082	1.856	3.893	.001
	LSIZE	3.631	1.834	.395	1.980	.058

a. Dependent Variable: ROA

Source: SPSS version 26

APPENDIX -V

Multiple Regression Analysis of Sample Banks (On ROE)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.879[a]	.773	.747	3.92956

a. Predictors: (Constant), LSIZE, DER, DAR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1366.857	3	455.619	29.506	.000[b]
	Residual	401.478	26	15.441		
	Total	1768.335	29			

a. Dependent Variable: ROE
b. Predictors: (Constant), LSIZE, DER, DAR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-54.825	24.310		-2.255	.033
	DER	.127	3.064	.012	.041	.967
	DAR	.530	.156	1.017	3.391	.002
	LSIZE	7.130	3.495	.256	2.040	.052

a. Dependent Variable: ROE

Source: SPSS version 26

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ABSTRACT This study investigates the impact of capital structure **on profitability of** insurance companies **in Nepal.** **Data was** collected **from** insurance companies in **Nepal** over a **ten-year** span (**2012/13**