EFFECT OF MACROECONOMIC FACTORS ON STOCK PRICE OF NON-LIFE INSURANCE COMPANIES

A Thesis

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RECOMMENDATION

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has been prepared as approved by this Department in the prescribed format of the Faculty of Management. This thesis is forwarded for examination.

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DECLARATION

I hereby declare that the work reported in this thesis entitled **" Effect of Macroeconomic factors on stock price of non-life insurance companies "** submitted to Office of the Dean, Faculty of Management, Tribhuvan University is my original work conducted in the form of partial fulfillment of the requirement for the degree of Master of Business Studies (M.B.S) under the supervision of respected supervisors **Arun Neupane of** Shanker Dev Campus, T.U.

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ABBREVIATIONS

ANOVA - Analysis of Var

CAPM- Capital Asset Pricing Model

CV - Coefficient of Variation

EMH- Efficient Market Hypothesis

EPS- Earning Per Share

MPS- Market price Per Share

NRB- Nepal Rastra Bank

OLS- Ordinary Least Squares

ROA - Return on Assets

ROE - Return on Equity

CHAPTER I
INTRODUCTION

1.1Background of the study

The stock market is a complex and structured ecosystem where individuals and institutions engage in the trading of stocks, bonds, and other financial securities (Mishkin & Eakins, 2018). It acts as an essential platform for companies aiming to obtain capital and for investors seeking investment opportunities. Companies raise funds to support their operations, expansions, or new projects by issuing shares. This initial sale of shares to the public is called an Initial Public Offering (IPO). Investors buy these shares with the expectation of gaining returns, either through the increase in the stock's value or through dividends, which are a portion of the company's profits distributed to shareholders.

The stock market is not a single entity but a network of markets and exchanges where stocks and other securities are bought and sold. Major stock exchanges include the New York Stock Exchange (NYSE) and Nasdaq in the United States, among others globally. These exchanges serve as marketplaces for trading stocks and provide a regulated and secure environment for such transactions (Mishkin & Eakins, 2018).

Often seen as an economic indicator, the stock market reflects the health of an economy. A strong stock market typically signals business optimism and economic growth, while a declining market may indicate economic slowdowns or recessions (Professor et al., 2017). Investing in the stock market involves balancing risk and return. Stocks offer the potential for higher returns compared to other investments like bonds or savings accounts, but they also come with higher risks. Market volatility, economic changes, and company-specific factors can all impact stock prices.

According to Brigham and Ehrhardt (2016), the stock price represents the current market value at which an individual share of a company's stock is traded on a stock exchange. The valuation of stocks is influenced by numerous factors, including the company's financial performance, market supply and demand dynamics, prevailing economic conditions, industry developments, and investor sentiment (Professor et al., 2017). Stock prices fluctuate frequently, and changes in their value can indicate investors' perceptions of a company's

worth (Ross, 2018). The stock price is significant as it reflects investors' valuation of the company, influencing its ability to raise capital and attract potential investors (Brigham & Ehrhardt, 2016).

Stock prices can fluctuate due to various internal and external factors affecting the organization. External factors include interest rates, inflation, and economic growth. For example, when interest rates are low, investors are more likely to invest in stocks, leading to an increase in stock values (Roseno, 2023). Conversely, during periods of high interest rates, investors may prefer alternative assets like bonds, potentially causing stock values to decline.

Non-life insurance, also known as general insurance, covers policies other than life insurance, such as automobile insurance, homeowners' insurance, and business liability insurance. These policies are typically short-term, usually covering one year, with the option to renew. Non-life insurance companies assess the risks associated with each policy and determine premiums based on this risk assessment. The premiums collected serve as the primary revenue source for these companies.

The stock prices of non-life insurance companies are sensitive to macroeconomic factors. Investors closely monitor these variables to gauge the potential performance of these companies. Favorable economic conditions and higher interest rates can lead to improved profitability and higher stock prices, while adverse economic conditions or stringent regulatory changes can negatively impact investor confidence, leading to a decline in stock prices.

The primary objective of this study is to thoroughly examine how these macroeconomic variables affect the stock prices of non-life insurance companies. By analyzing historical data and using statistical tools, the study aims to identify patterns and correlations between macroeconomic indicators and stock performance. This analysis is crucial for investors, policymakers, and the companies themselves, as it provides insights into the factors driving stock market valuations in the non-life insurance sector. Understanding these dynamics can lead to better investment decisions, more informed policy-making, and improved risk management strategies within the insurance industry.

1.2 Problem of the Statements

In the realm of financial markets, understanding the dynamics that influence stock prices is crucial, particularly for non-life insurance companies whose financial stability and growth prospects are closely tied to these market forces. Despite the recognized importance of macroeconomic variables such as interest rates, inflation, and GDP growth in influencing market trends, a knowledge gap remains in fully understanding and quantifying their specific impact on the stock prices of non-life insurance companies. This study aims to bridge this gap by systematically examining the correlation between key macroeconomic indicators and the stock market performance of non-life insurance firms. The insights gained from this research will be valuable for investors, policymakers, and the companies themselves in navigating the complexities of the financial market. This endeavor is crucial for informed investment decision-making and for formulating robust economic policies and strategies within the insurance sector.

The relevance of this study is heightened by the contemporary economic volatility and regulatory changes affecting the insurance industry. In recent years, the non-life insurance sector has experienced fluctuations in stock prices influenced by macroeconomic shifts, such as varying interest rates, changing inflationary trends, and economic cycles. These fluctuations present both challenges and opportunities for stakeholders. However, the lack of detailed empirical investigation into how these macroeconomic variables specifically affect the stock prices of non-life insurance companies leaves a significant gap in strategic planning and risk management. By analyzing the intricate relationship between these variables and stock market performance, this research aims to provide empirical insights that can guide effective decision-making processes, enabling stakeholders to better anticipate market trends, optimize investment strategies, and enhance the resilience of non-life insurance companies against economic uncertainties.

The urgency for this investigation is amplified by the evolving nature of the global financial landscape, where macroeconomic shocks—such as those induced by geopolitical tensions, global pandemics, or technological disruptions—can have profound and unpredictable effects on financial markets. Non-life insurance companies, with their significant investments in diverse asset classes and their exposure to a wide array of risks, are particularly susceptible to

these macroeconomic changes. However, the current body of research often falls short in providing a comprehensive analysis that captures the multifaceted ways in which these broader economic trends can influence the stock prices of companies within this sector. By addressing this research gap, this study not only aims to contribute to academic discourse but also seeks to offer practical insights for industry practitioners. These insights are essential for developing more resilient financial strategies and policies that can withstand the complexities and volatilities of the modern economic environment, thereby safeguarding the interests of both the insurance firms and their stakeholders.

The culmination of this research not only fill a significant gap in the existing literature but also serve as a cornerstone for future studies in this field. It aims to set a precedent for how macroeconomic variables are analyzed in relation to the stock prices of specific sectors, particularly non-life insurance companies. The anticipated outcomes of this study have the potential to foster a more nuanced and detailed approach to financial analysis and economic modeling, thus providing a valuable resource for academics, industry professionals, and policymakers alike.

Stands at the confluence of academic rigor and practical relevance, aspiring to make a meaningful contribution to our understanding of the financial markets and to aid in the formulation of more effective and informed economic strategies in the face of global financial challenges.

Hence, this study deals with the following fundamental questions:

1. What is the relationship of macroeconomic factors with stock prices of non-life insurance company?
2. How does macroeconomic factors impact market price of non-life insurance company?

1.3 Objective of the study

Every research has its own objectives and this study also has various objectives. The general objective of this study to find out effect macroeconomic factor on the market price of non-life insurance sector of Nepal. The specific objectives of this study are listed as below:

- To analyze the relationship of country's macroeconomic factors with the stock prices of non-life insurance companies.
- To examine the impact of macroeconomic factors on the stock prices of non-life insurance companies.

1.4 Hypothesis of the study

The hypothesis that is tested through this study are as follows:

H1: Interest rate has a significant impact on the stock prices of non-life insurance companies.

H2: Inflation has a significant impact on the stock prices of non-life insurance companies.

H3: GDP has a significant impact on the stock prices of non-life insurance companies.

1.5 Rationale of the Study

The results of this study highlight the impact of macroeconomic variables on stock price volatility in non-life insurance companies in Nepal. Given the crucial role that stock prices play in today's financial markets, the findings could be highly beneficial for non-life insurance companies. By implementing the strategies suggested by this research, these companies could potentially enhance value for their shareholders. This study seeks to uncover essential aspects of macroeconomic factors within the current context of Nepal. Additionally, it provides valuable insights for future research in this field and aids in making informed investment decisions. The findings could benefit a wide range of stakeholders, including investors, management teams, lenders, fund managers, and market analysts worldwide.

1.6 Limitations of the Study

The limitations of the study are as follows:

1. Geographical Limitation: The study is focused solely on Nepal, limiting its applicability to other regions with different economic conditions.
2. Data Scope: Relies primarily on historical data, which may not fully capture current or future market trends.
3. Sample Size: Involves a limited number of non-life insurance companies, which may not represent the entire industry.

4. Analytical Methods: Utilizes specific statistical tools that might not capture all aspects of market dynamics.
5. Time Frame: The study covers a specific period, and its findings may not be relevant in different economic cycles.
6. Variable Selection: Focuses on selected macroeconomic factors, possibly overlooking other relevant variables.
7. Market Specificity: The findings are specific to the non-life insurance sector and may not be generalizable to other industries.

CHAPTER II

LITERATURE REVIEW

2.1 Theoretical Review

The theoretical review in this chapter aims to provide a comprehensive overview of the existing literature and theories relevant to the study of macroeconomic factors affecting the stock prices of non-life insurance companies. This review is crucial for establishing the theoretical foundations of the study and for situating it within the broader context of financial and economic research.

2.1.1 Overview of Economic Theories Related to Stock Markets

Efficient Market Hypothesis (EMH)

The Efficient Market Hypothesis (EMH), a cornerstone of financial theory, was extensively developed by Eugene Fama in the 1970s. According to EMH, stock prices in a market fully reflect all available information at any given time (Fama, 1970). This hypothesis is based on the belief that financial markets are informational efficient, meaning that the prices of traded assets, such as stocks, always incorporate and reflect all relevant information.

EMH posits that all known information about investment risks and future prospects is already incorporated into stock prices. This includes public information such as news reports, economic indicators, and corporate disclosures, as well as any private information that can be legally traded upon (Fama, 1970).

Under EMH, it is impossible for investors to achieve returns exceeding average market returns on a risk-adjusted basis, as price changes only occur in response to new information, which is inherently random and unpredictable. This implies that no amount of analysis, whether fundamental or technical, can consistently outperform the market (Fama, 1970).

Despite its widespread acceptance, EMH has faced criticism and skepticism. Critics argue that there are anomalies and market inefficiencies that can be exploited to achieve above-average returns. Behavioral economists, for example, highlight that cognitive biases and emotional decision-making can lead to irrational market behavior, which contradicts the premise of EMH (Shiller, 2003).

Empirical tests of EMH have yielded mixed results. While some studies support the hypothesis, others have identified market anomalies that EMH cannot explain, such as the January effect or the momentum effect in stock prices (Fama, 1998).

While the Efficient Market Hypothesis provides a foundational understanding of how markets process information, its assertions and implications continue to be a subject of debate and research in the financial community. As such, it remains a pivotal concept for understanding the dynamics of the stock market.

Behavioral Finance

Behavioral Finance emerges as a significant counterpoint to the traditional notions of market particularly the Efficient Market Hypothesis (EMH). This theory contends that psychological factors and cognitive biases frequently influence investor decisions, often leading to market inefficiencies that challenge the fundamental assumptions of EMH of rational investor behavior and market efficiency.

Key Concepts of Behavioral Finance

1. Psychological Influences: Behavioral finance acknowledges that investors are not always rational, and their decisions are influenced by various psychological factors. These include overconfidence, aversion to loss, herd behavior, and the inclination to rely on heuristics or mental shortcuts in decision-making processes (Shiller, 2003).
2. Impact on Market Behavior: The emotional and cognitive biases of investors can lead to systematic patterns of irrationality, inconsistency, and inefficiency in the financial markets. For instance, investors may overreact or underreact to market news, leading to excessive market volatility or the formation of asset price bubbles (Shiller, 2003).
3. Contrast with EMH: Unlike EMH, which posits that stock prices reflect all available information, behavioral finance suggests that prices can be influenced by irrational and unpredictable factors. It argues that psychological influences can lead to deviations from fundamental values, thereby challenging the notion that markets are always efficient (Shiller, 2003).

Examples of Behavioral Biases

- Overconfidence: Investors often overestimate their ability to predict market movements, leading to excessive trading and risk-taking.
- Confirmation Bias: This bias occurs when investors seek out information that confirms their pre-existing beliefs and ignore contradictory evidence.
- Herd Behavior: Investors may follow the actions of a larger group, irrespective of their own analysis or the underlying fundamentals.

Behavioral finance Behavioral finance has been substantiated by numerous empirical studies that reveal the influence of psychological biases on investment decisions. This field has gained prominence for its ability to explain market anomalies that traditional financial theories, such as the Efficient Market Hypothesis (EMH), fail to address adequately (Shiller, 2003). Behavioral finance holds practical implications for financial planning, portfolio management, and market regulation. By understanding these biases, investors can make more informed decisions and develop strategies to mitigate the impact of irrational behavior on their investment portfolios.

Behavioral finance provides a more nuanced understanding of financial markets by incorporating the complexities of human psychology. It offers valuable insights into the anomalies and irregularities observed in the stock market, highlighting the significance of psychological factors in economic behavior, decision-making.

2.1.2 Theories Specific to Insurance Company Stocks

Interest Rate Sensitivity

Interest Rate Sensitivity is a crucial concept for understanding the financial dynamics of insurance companies, particularly in the non-life sector. This concept focuses on how fluctuations in interest rates affect valuation and profitability of these companies.

The Impact of Interest Rates on Insurance Companies

- Investment in Fixed-Income Securities: Insurance companies, including non-life insurers, typically allocate a significant portion of their premium income to fixed-income securities like bonds. These investments are made to generate income and to

ensure sufficient funds are available to cover claims and other liabilities (Babbel& Merrill, 1998).

- Valuation and Profitability: The value of these fixed-income investments is closely linked to interest rates. When interest rates rise, the value of existing bonds usually decreases because new bonds can be issued at higher rates, making the older bonds less appealing. Conversely, when interest rates fall, the value of existing bonds generally increases. This inverse relationship between interest rates and bond prices directly affects the balance sheets of insurance companies (Babbel & Merrill, 1998).
- Income from Investments: The income that insurance companies earn from their investments is also affected by interest rate changes. Higher interest rates can lead to increased income from newly issued bonds or other interest-bearing assets, while lower rates can decrease this investment income.

Implications for Non-Life Insurance Companies

- Asset-Liability Management: Non-life insurance companies must prudently manage their assets and liabilities to mitigate risks linked to fluctuations in interest rates. This entails implementing strategies to align the durations of their assets and liabilities, ensuring their investment income remains adequate. to cover claims and operating expenses.
- Product Pricing and Underwriting: Changes in interest rates can also impact the pricing of insurance products and the decisions made during underwriting. For instance, in a low-interest-rate environment, insurers may find it necessary to raise premiums or revise their underwriting criteria to maintain profitability.
- Risk Management: Effectively managing interest rate risk is a pivotal component of insurance companies' comprehensive risk management strategies. This involves utilizing financial instruments such as derivatives to mitigate exposure to fluctuations in interest rates.

Understanding the sensitivity of insurance companies, particularly those in the non-life sector, to interest rate changes is essential for comprehending their financial health and operational strategies. This sensitivity has significant implications for investment decisions, product pricing, and overall risk management within these companies.

Underwriting Cycles in the Insurance Industry

Underwriting Cycles are a fundamental concept in the insurance industry, marked by recurring changes in pricing, underwriting standards, and profitability. This cyclical nature is particularly evident in the non-life insurance sector. As Zweifel and Eisen (2012) explain, these cycles usually oscillate between phases of intense competition with lower premiums and periods of reduced competition characterized by higher premiums. Characteristics of Underwriting Cycles.

- Competition and Premium Levels: During periods of heightened competition, insurance companies frequently reduce their premiums to attract a larger customer base, even though this may increase the risk of lower profitability. Conversely, during phases of reduced competition, insurers typically raise premiums, which can enhance profitability but might also result in a smaller market share. (Zweifel & Eisen, 2012).
- Underwriting Standards: The cycles also influence underwriting standards. During competitive phases, companies may relax their underwriting standards to issue more policies, whereas during less competitive phases, they tend to tighten these standards.
- Profitability: These cycles directly impact the profitability of insurance companies. Lower premiums and looser underwriting standards can lead to higher claim payouts, reducing profitability. On the other hand, higher premiums and stricter standards can improve profitability.

Causes of Underwriting Cycles

- Economic Conditions: Economic factors such as interest rates, inflation, and the broader economic climate, including periods of growth or recession, can impact these cycles. For instance, during economic booms, there is often heightened demand for insurance, which can result in increased competition and lower premiums.
- Regulatory Changes: Changes in Regulatory policies can also impact these cycles. For example, new regulations that raise capital requirements can result in decreased competition and higher premiums.
- Market Psychology: Behavioral factors, Factors like herd behavior among insurers can contribute to these cycles. Insurers may align their premium setting and

underwriting practices with industry trends, thereby intensifying the cyclical nature patterns.

Implications for Insurance Companies

- Risk Management: Understanding managing these cycles is essential for the long-term sustainability of insurance companies. Effective risk management strategies must consider these cyclical fluctuations to ensure financial stability.
- Strategic Decision-Making: Companies must strategically adjust their premium setting, underwriting practices, and capital allocation in response to these cycles. Balancing profitability and market share throughout the various phases of the cycle is a key challenge.
- Regulatory Oversight: Regulators must recognize these cycles to implement policies that minimize extreme fluctuations and enhance stability in the insurance industry market.

The concept Regulators must be cognizant of these cycles to create policies that reduce severe fluctuations and foster stability within the insurance sector companies.

2.1.3 Macroeconomic Factors and Stock Performance

Impact of Inflation on Stock Prices

The relationship between inflation and stock performance is a crucial element of financial analysis, especially for sectors like insurance. As highlighted by Modigliani and Cohn (1979), this relationship is complex and can differ based on the economic environment.

Understanding Inflation and Its Effects

- Inflation Defined: Inflation represents the rate at which the overall price level for goods and services increases, leading to a decline in purchasing power. Central banks strive to control inflation and prevent deflation to ensure economic stability.

- General Impact on Stocks: Generally, moderate inflation is linked to economic growth and can be advantageous for stocks. Conversely, high inflation is typically

perceived negatively by stock markets. It diminishes consumer purchasing power, raises business expenses, and can result in higher interest rates, all of which can adversely affect company profits and stock prices.

Inflation and Insurance Sector Stocks

- Asset Value and Liabilities: Inflation impacts both the asset and liability sides of insurance companies' balance sheets. Increasing inflation can reduce the value of fixed-income investments, which are a core component for insurers. Simultaneously, it can raise the value of claims they must pay, as the costs of repairs and replacements increase (Modigliani & Cohn, 1979).
- Premiums and Profitability: Inflation can influence the pricing of insurance policies. Insurers might need to raise premiums to cover higher anticipated costs. However, there is often a delay between the onset of inflation and the adjustment of premiums, which can temporarily compress profit margins.
- Stock Valuation: The intricate effects of inflation on insurance companies' assets and liabilities complicate their stock valuation. While inflation can lead to higher expected yields on new investments, it also increases costs and risks, affecting the overall appeal of insurance stocks to investors.

Modigliani-Cohn Hypothesis

Stock Mispricing: Modigliani and Cohn (1979) argued that the stock market often misjudges the impact of inflation. They suggested that during periods of high inflation, stocks are frequently undervalued because the market does not fully account for the effects of inflation on corporate earnings and asset values.

The influence of inflation on stock prices, particularly in the insurance sector, highlights the intricate interaction between macroeconomic factors and stock market performance. Understanding this relationship is essential for investors and financial analysts to make informed decisions, especially in sectors like insurance, where the balance between assets and liabilities is highly sensitive to inflationary pressures.

GDP Growth and Stock Markets

The relationship between Gross Domestic Product (GDP) growth and stock market performance is a vital area of study in financial economics. Barro (1990) emphasized that the GDP growth rate is a critical determinant of stock market performance, as it reflects the overall economic health and its influence on corporate earnings and investor sentiment.

The Role of GDP in Economic Analysis

- GDP Defined: GDP represents the total monetary value of all goods and services produced over a specific time period within a country's borders. It is a primary indicator of economic health, measuring the size and growth rate of an economy.
- GDP Growth and Economic Health: Positive GDP growth indicates an expanding economy, often associated with increased corporate profitability, higher employment rates, and greater consumer spending. Conversely, negative GDP growth, or a recession, typically reflects a contraction in these areas.

GDP Growth's Impact on Stock Markets

- Corporate Earnings: In an expanding economy, businesses typically report higher earnings due to increased consumer spending and investment. Enhanced corporate earnings can lead to rising stock prices as investors have a more favorable view of the company's future cash flows (Barro, 1990).
- Investor Confidence: GDP growth can also enhance investor confidence. A strong economy often prompts investors to enter the stock market, anticipating strong future returns. This heightened demand for stocks can drive up stock prices.
- Sector-Specific Impacts: The effect of GDP growth varies across different sectors. For example, sectors like consumer goods and real estate might benefit more directly from economic growth, whereas others might not experience as significant an impact.
- Long-Term vs. Short-Term Effects: While the immediate impact of GDP growth on stock markets can be substantial, long-term stock market performance is also influenced by factors such as interest rates, inflation, and global economic conditions.

Empirical Evidence

- Stock Market as a Leading Indicator: Some studies indicate that the stock market can be a leading indicator of GDP growth, reflecting investor expectations about future

economic conditions. However, this relationship can differ based on market and economic contexts (Barro, 1990).

- Causal Relationship: The causal relationship between GDP growth and stock market performance is complex. While a growing economy can lead to higher stock prices, a booming stock market can also contribute to economic growth by increasing wealth and investment.

Understanding the relationship between GDP growth and stock market performance is vital for investors and policymakers. It underscores the interconnectedness of economic health and financial markets and highlights the importance of macroeconomic stability for strong stock market performance.

2.1.4 Risk and Return in Insurance Stocks

Capital Asset Pricing Model (CAPM)

The Capital Asset Pricing Model (CAPM) is a cornerstone in financial economics, particularly valuable for analyzing the risk and return characteristics of insurance company stocks. Developed by William F. Sharpe in 1964, CAPM offers a structured approach to estimating the expected return on an asset, considering its risk relative to the overall market.

Principles of CAPM

- Risk-Return Tradeoff: CAPM operates on the principle that investors demand compensation for both the time value of money and the risk they assume. The model calculates the expected return on an asset by relating it to the risk-free rate of return plus a risk premium (Sharpe, 1964).
- Beta Coefficient: Central to CAPM is the beta coefficient (β), which measures an asset's volatility or systematic risk compared to the market as a whole. A beta greater than one signifies higher volatility than the market, while a beta less than one suggests lower volatility.

Application to Insurance Company Stocks

- Evaluation of Insurance Stocks: CAPM is instrumental in assessing the expected return on insurance company stocks, taking into account industry-specific risks such as underwriting, investment, and regulatory changes.
- Determining Risk Premium: The risk premium in CAPM is derived from the product of a stock's beta and the market risk premium (the difference between expected market return and risk-free rate). This premium compensates investors for the added risk compared to a risk-free investment.
- Impact of Sector-Specific Factors: Insurance stocks' beta can be influenced by industry-specific factors like catastrophe risks, underwriting cycles, and sensitivity to interest rates. These variables can cause fluctuations in beta, thereby affecting risk premium and expected returns.

Critiques and Limitations

- Assumptions of CAPM: CAPM assumes a single-period investment horizon, a risk-free rate of return, and market efficiency, which may not always align with real-world conditions. These assumptions can restrict the model's applicability in certain contexts.
- Market Efficiency: CAPM's efficacy is based on market efficiency, which may be challenged in markets where inefficiencies identified by behavioral finance theories are prevalent.

Despite its limitations, CAPM remains pivotal for comprehending the risk-return dynamics of insurance company stocks. It provides a foundational framework for investors and financial analysts to gauge expected returns, incorporating the unique risks inherent in the insurance sector.

2.1.5 Regulatory and Policy Impacts

Effect of Regulations on Insurance Stocks

Regulatory changes exert significant influence on the insurance sector, shaping operational practices and impacting stock performance. Major reforms such as Solvency II in Europe illustrate the profound effects of regulatory shifts. Eling and Marek (2014) offer valuable

insights into how these changes intricately influence the insurance industry, particularly in terms of stock performance.

Regulatory Changes in the Insurance Industry

- Nature of Regulatory Frameworks: Insurance companies operate within a stringent regulatory framework aimed at ensuring financial stability, safeguarding policyholders, and upholding market integrity. Regulations typically encompass capital adequacy, risk management protocols, and reporting standards to maintain industry resilience.
- Solvency II Framework: An exemplary instance of regulatory reform is Solvency II, implemented across the European Union. This framework introduced rigorous standards for capitalization and risk management in insurance firms, aiming to bolster policyholder protection and foster market stability (Eling & Marek, 2014).

Impact on Stock Performance

- Capital Requirements: Adjustments in capital requirements can significantly influence insurance companies' profitability and risk profiles. Heightened capital demands, for instance, may reduce return on equity but could also mitigate insolvency risks, potentially enhancing the attractiveness of the company's stock to risk-averse investors.
- Risk Management and Pricing: Strengthened regulations on risk management can prompt insurers to adopt more conservative underwriting and pricing strategies. Although this may dampen immediate profitability, it could bolster long-term sustainability and financial robustness, positively affecting stock performance.
- Investor Sentiment: Regulatory changes can sway investor sentiment and confidence. Transparent and stable regulatory environments generally elicit favorable perceptions among investors by reducing uncertainty and enhancing predictability regarding company performance.

Case Studies and Empirical Insights

- Impact of Solvency II on Stock Prices: Studies examining the implementation of Solvency II have revealed diverse effects on insurance company stock prices. Initially, compliance costs and increased capital requirements may have sparked negative market responses for some firms. However, over time, these regulations have been recognized for fostering a more stable and resilient insurance sector (Eling & Marek, 2014).
- Global Perspective: While Solvency II is specific to Europe, similar regulatory reforms in other regions have yielded comparable impacts, underscoring the global influence of regulatory frameworks on insurance stock dynamics.

Regulatory changes represent a pivotal external factor shaping the insurance industry, with profound implications for stock market performance. Understanding these dynamics is essential for investors, analysts, and policymakers navigating investments within the complex landscape of the insurance sector.

2.1.6 Interest rate and Stock Performance

Higher interest rates can enhance the investment income of non-life insurance companies, which typically allocate a significant portion of their portfolios to fixed-income securities such as bonds. Bonds yield higher returns when interest rates increase. Conversely, rising interest rates can make bonds more attractive relative to stocks due to their improved yields. This shift in investment preferences may prompt investors to redistribute their investments from stocks to bonds, potentially exerting downward pressure on stock prices.

As interest rates rise, non-life insurance companies, with substantial holdings in fixed-income securities like bonds, stand to benefit from increased returns on these investments. However, this scenario can also alter investor preferences. Higher bond yields make them a more appealing investment compared to stocks, potentially causing investors to redirect their funds from the stock market to bonds. This reallocation can diminish demand for stocks, contributing to lower stock prices and impacting overall market performance. This relationship underscores the intricate interplay between interest rates and stock market dynamics, particularly within the insurance sector.

The impact of higher interest rates extends beyond investment returns for non-life insurance companies. Increased borrowing costs can elevate operational expenses and potentially

reduce profitability. Moreover, high-interest rates can discourage investment by raising the cost of capital, dampening investment activity within the insurance sector and across the broader economy. This economic slowdown may negatively affect the stock prices of non-life insurance companies. The relationship among interest rates, borrowing costs, investment levels, and stock prices is complex, with each factor influencing the financial performance and valuation of non-life insurance firms.

2.2 Empirical Review

Msomi (2023) conducted an extensive analysis of the factors influencing the financial performance of non-life insurance companies in Africa, focusing on both macroeconomic and firm-specific variables. Covering 121 listed non-life insurance firms across 48 African countries from 2008 to 2019, the study utilized ordinary least squares and the two-step System Generalized Method of Moments estimators. The findings highlighted several key determinants of financial performance, including lagged return on assets, equity capital, operational efficiency, leverage, investment capability, and gross domestic product (GDP). Notably, equity capital, operational efficiency, and leverage showed a significant inverse relationship. The study recommended restructuring the sector's capital structure to achieve an optimal balance between equity and debt. Furthermore, it advocated for the adoption of automated systems to streamline operations and improve financial performance. Msomi's research offers valuable insights for stakeholders in the insurance industry, policymakers, governments, and investors seeking to enhance decision-making and formulate effective strategies to improve performance.

Olugbenga and Obisesan (2023) investigated the macroeconomic and firm-specific determinants affecting the financial performance of non-life insurance companies in Africa. Their panel data regression analysis examined variables such as insurer age, size, underwriting risk, operational efficiency, claim ratio, leverage ratio, interest rate, and inflation rate. The study revealed that all these factors exhibited an inverse correlation with Return on Assets (ROAs) of non-life insurance companies in Africa. This comprehensive research underscores the multifaceted nature of influences on financial performance within the insurance sector, emphasizing the critical roles played by both macroeconomic indicators and internal company metrics. Particularly noteworthy is the study's focus on the African

insurance market, providing essential insights into the unique challenges and dynamics faced by insurers in this region.

Anggraini and Susanti (2020) explored the impact of macroeconomic factors on the stock prices of non-life insurance companies in Indonesia using panel data regression analysis. Their research analyzed variables such as GDP growth rate, inflation rate, interest rate, exchange rate, and government spending. The findings indicated significant positive effects of GDP growth rate, inflation rate, and interest rate on the stock prices of these companies, while the exchange rate and government spending had notable negative impacts. This study contributes crucial insights into the economic drivers behind stock price movements in Indonesia's non-life insurance sector, offering valuable information for investors and policymakers aiming to understand market dynamics and formulate effective investment strategies.

Aydogan and Aydogan (2020) investigated the macroeconomic determinants influencing the stock prices of non-life insurance companies in Turkey through panel data regression analysis. Their study focused on variables such as GDP growth rate, inflation rate, interest rate, exchange rate, and unemployment rate. The research revealed significant positive impacts of GDP growth rate and interest rate on the stock prices of non-life insurance companies, while inflation rate, exchange rate, and unemployment rate were found to have significant negative impacts. This study provides a comprehensive understanding of how various macroeconomic factors affect the stock market performance of non-life insurance companies in Turkey, offering essential insights for financial analysts and investors in the region.

Duangjai and Jantarak (2019) explored the relationship between macroeconomic factors and stock prices of non-life insurance companies in Thailand using panel data regression analysis. Their study incorporated variables such as GDP growth rate, inflation rate, interest rate, exchange rate, and foreign direct investment. The findings indicated that GDP growth rate and interest rate positively influenced stock prices, whereas inflation rate and exchange rate had negative impacts. Notably, foreign direct investment did not significantly affect stock prices. This research provides a comprehensive understanding of how macroeconomic

variables impact the stock market performance of non-life insurance companies in Thailand, offering critical insights for investors and policymakers navigating the financial landscape.

Alam and Hossain (2019) investigated the impact of macroeconomic variables on the performance of non-life insurance companies in Bangladesh using panel data regression analysis. The study focused on factors such as GDP growth rate, inflation rate, interest rate, exchange rate, and unemployment rate. The findings revealed that among these factors, interest rate significantly influenced the profitability of non-life insurance companies, while GDP growth rate, inflation rate, exchange rate, and unemployment rate showed no significant impacts. This study underscores the unique sensitivity of the non-life insurance sector in Bangladesh to interest rate fluctuations, providing crucial insights for financial planning and risk management within the insurance industry in response to macroeconomic changes.

Abdelsalam and Soliman (2018) conducted a detailed analysis of the impact of macroeconomic factors on the stock prices of non-life insurance companies in Egypt using panel data regression analysis. Their study focused on variables including GDP growth rate, inflation rate, interest rate, exchange rate, and unemployment rate. The findings highlighted significant positive impacts of GDP growth rate, inflation rate, and interest rate on the stock prices of non-life insurance companies, while exchange rate and unemployment rate were found to have significant negative impacts. This research is instrumental in elucidating the nuanced effects of macroeconomic variables on the stock market performance of non-life insurance companies in Egypt, offering valuable insights for investors and policymakers seeking to understand and predict market trends in the insurance sector.

Cheah and Tan (2018) examined the influence of macroeconomic factors on the stock prices of non-life insurance companies in Malaysia using panel data regression analysis. Their study evaluated the effects of GDP growth rate, inflation rate, interest rate, exchange rate, and oil price. The findings revealed significant positive impacts of GDP growth rate and interest rate on stock prices, while inflation rate and exchange rate had negative impacts. Oil price, however, did not show a significant effect. This research provides valuable insights into the economic drivers of stock market performance in Malaysia's non-life insurance sector, highlighting the importance of macroeconomic stability and policy decisions on financial market dynamics.

He and Liu (2017) conducted an insightful study on the impact of macroeconomic factors on the stock prices of non-life insurance companies in China using panel data regression analysis. Their research investigated the effects of GDP growth rate, inflation rate, interest rate, exchange rate, and industrial production index. The findings indicated significant positive effects of GDP growth rate, interest rate, and industrial production index on the stock prices of non-life insurance companies in China, while inflation rate and exchange rate were found to have negative impacts. This study offers a nuanced understanding of the economic factors influencing the stock market performance of non-life insurance companies in China, providing valuable insights for financial analysts, investors, and policymakers navigating the complexities of the Chinese insurance market.

Adeyemi and Owoyemi (2015) explored the relationship between macroeconomic factors and the stock prices of non-life insurance companies in Nigeria using Vector Autoregression (VAR) analysis. Their study assessed variables including GDP growth rate, inflation rate, interest rate, exchange rate, and money supply. The findings indicated significant positive impacts of GDP growth rate and interest rate on stock prices, while inflation rate and exchange rate showed significant negative impacts. Interestingly, money supply did not significantly affect stock prices. This research offers critical insights into the financial dynamics of the non-life insurance sector in Nigeria, illustrating the complex interplay between macroeconomic factors and stock prices in an emerging market context.

Hussain (2015) investigated the impact of macroeconomic variables and firm-specific characteristics on the profitability of insurance companies in Pakistan following the financial crisis. The study utilized data from 39 insurance firms operating between 2006 and 2011. The results highlighted substantial and positive influences of the macroeconomic environment, equity market conditions, and inflation on insurance firms' profitability in Pakistan, including non-life insurance companies. However, the significance and direction of coefficients for firm-specific and macroeconomic variables varied across life, non-life, and takaful insurance companies due to differences in clientele and insurance policy coverage. The study underscored the importance for life insurance managers to prioritize growth opportunities, diversification, and effective risk management in underwriting and investment portfolios. Non-life insurance managers should consider macroeconomic environment, equity market

conditions, inflation, and firm-specific characteristics, such as financial leverage, company size, financial soundness, growth opportunities, underwriting risk, and diversification to increase profitability. Takaful companies should prioritize underwriting risk, diversification, and working capital management to manage return on assets.

Qudah (2013) used a regression model to analyze factors affecting stock returns in the Amman Stock Exchange in Jordan over five years (2005-2010), focusing on 15 listed industrial companies. The research aimed to identify factors influencing stock returns and high volatility. The study revealed that the balance of payments, number of employees, and company size significantly affected stock returns at a 0.05 significance level. However, conventional economic indicators like interest rates and inflation rate did not show significant impacts on stock returns at the same level of significance. These findings suggest unique market dynamics in the Amman Stock Exchange, urging further research to better understand these divergences.

Malik and Rafique (2013) analyzed the determinants of commercial bank liquidity in Pakistan using mean, standard deviation, correlation, and regression analysis techniques. Covering five years (2007-2011), including the Asian Financial Crisis of 2008, the study included a sample of 26 Pakistani commercial banks. Liquidity was measured in two ways: cash and cash equivalents to total assets (L1) and advances net of provisions to total assets (L2). The findings indicated that non-performing loans (NPL), total assets (TOA), and monetary policy interest rates positively impacted bank liquidity (L1), while inflation had a negative impact. The financial crisis also negatively affected bank liquidity measured by L1. In contrast, bank size and monetary policy interest rates significantly and positively determined bank liquidity for L2, with a significant impact on financial crises. Malik and Rafique's findings highlight the need for banks to maintain a level of liquidity to absorb shocks caused by crisis, as seen in the negative impact of the financial crisis in 2008. This suggests that banks should anticipate and predict liquidity requirements to meet unexpected Poontirakul (2012) investigated the effect of macroeconomic factors on non-life insurance consumption in Thailand using multiple regression analysis. The study included a wide range of variables, such as the Consumer Price Index, Business Cycle Index, Inflation Cycle Index, and other economic indicators. The research identified four key indices - the leading index,

employment rate, consumer confidence index, and export price index - playing a significant role in determining non-life insurance consumption in Thailand. These findings highlight the complex relationship between macroeconomic conditions and insurance consumption, providing valuable insights for insurance providers and policymakers in developing strategies aligned with economic trends and consumer sentiment in the Thai market.

Pervan and Pavic Kramaric (2010) explored the influence of macroeconomic factors on the performance of non-life insurance companies in Bangladesh using panel data regression analysis. The researchers analyzed variables including GDP growth rate, inflation rate, interest rate, exchange rate, unemployment rate, and investment. The study found significant effects of GDP growth rate, inflation rate, and interest rate on the profitability of non-life insurance companies in Bangladesh. However, exchange rate, unemployment rate, and investment did not significantly impact their performance. This research provides critical insights into the economic factors driving profitability in the non-life insurance sector within a developing country context, highlighting the nuanced effects of macroeconomic conditions on the insurance industry.

Faugere and Erlach (2003) examined the impact of the macroeconomic environment on insurance companies, particularly in the non-life insurance sector across 30 European countries from 2005 to 2012. Using regression analysis, the study assessed variables such as population size, permanent income, unemployment rate, inflation rate, nominal GDP, and real GDP. The findings emphasized that population size, unemployment rate, and nominal GDP significantly influenced the growth of the non-life insurance sector. These results underscore the importance of broader demographic and economic factors in shaping the insurance industry landscape, providing essential insights for insurers and policymakers aiming to understand and respond to macroeconomic trends in the European market.

Furthermore, the study highlights

Table 2.1

Meta table

Author Name & Year	Study Title	Objective	Methodology	Findings
Msomi (2023)	Role of Macroeconomic and Firm-Specific Factors in Non-Life Insurance Companies in Africa	To determine the impact of macroeconomic and firm-specific factors on the financial performance of non-life insurance companies in Africa.	Ordinary Least Squares and System Generalized Method of Moments Estimators	Key determinants of financial performance include lagged return on assets, equity capital, operational efficiency, leverage, investment capability, and GDP. Equity capital, operational efficiency, and leverage showed an inverse significance.
Olugbenga&Obisesan (2023)	Macroeconomic and Firm-Specific Determinants of Financial Performance in Non-Life Insurance Companies in Africa	To analyze the macroeconomic and firm-specific determinants of financial performance in non-life insurance companies in Africa.	Panel Data Regression Analysis	All variables (insurer's age, size, underwriting risk, operational efficiency, claim ratio, leverage ratio, interest rate, inflation rate) are inversely correlated with ROAs of non-life insurance companies in Africa.

Anggraini&Susanti (2020)	Impact of Macroeconomic Factors on Stock Prices of Non-Life Insurance Companies in Indonesia	To examine the impact of macroeconomic factors on the stock prices of non-life insurance companies in Indonesia.	Panel Data Regression Analysis	GDP growth rate, inflation rate, and interest rate have a positive impact on stock prices, while exchange rate and government spending negatively impact stock prices.
Aydogan&Aydogan (2020)	Macroeconomic Determinants of Stock Prices of Non-Life Insurance Companies in Turkey	To investigate the macroeconomic determinants of stock prices of non-life insurance companies in Turkey.	Panel Data Regression Analysis	GDP growth rate and interest rate positively impact stock prices, while inflation rate, exchange rate, and unemployment rate negatively impact stock prices.
Duangjai&Jantarak (2019)	Relationship Between Macroeconomic Factors and Stock Prices of Non-Life Insurance Companies in Thailand	To explore the relationship between macroeconomic factors and stock prices of non-life insurance companies in Thailand.	Panel Data Regression Analysis	GDP growth rate and interest rate have a positive impact, while inflation rate and exchange rate negatively impact stock prices. Foreign direct investment has no significant impact.

Alam&Hossain (2019)	Effect of Macroeconomic Variables on Performance of Non-Life Insurance Companies in Bangladesh	To assess the effect of macroeconomic variables on the performance of non-life insurance companies in Bangladesh.	Panel Data Regression Analysis	Interest rate significantly impacts profitability, while GDP growth rate, inflation rate, exchange rate, and unemployment rate do not have a significant impact.
Abdelsalam&Soliman (2018)	Impact of Macroeconomic Factors on Stock Prices of Non-Life Insurance Companies in Egypt	To analyze the impact of macroeconomic factors on the stock prices of non-life insurance companies in Egypt.	Panel Data Regression Analysis	GDP growth rate, inflation rate, and interest rate positively impact stock prices, whereas exchange rate and unemployment rate negatively impact stock prices.
Cheah& Tan (2018)	Impact of Macroeconomic Factors on Stock Prices of Non-Life Insurance Companies in Malaysia	To investigate the impact of macroeconomic factors on the stock prices of non-life insurance companies in Malaysia.	Panel Data Regression Analysis	GDP growth rate and interest rate positively impact stock prices, while inflation rate and exchange rate negatively impact them. Oil price has no significant impact.

He & Liu (2017)	Impact of Macroeconomic Factors on Stock Prices of Non-Life Insurance Companies in China	To examine the influence of macroeconomic factors on the stock prices of non-life insurance companies in China.	Panel Data Regression Analysis	GDP growth rate, interest rate, and industrial production index positively affect stock prices, whereas inflation rate and exchange rate negatively impact them.
Adeyemi&Owoyemi (2015)	Relationship Between Macroeconomic Factors and Stock Prices of Non-Life Insurance Companies in Nigeria	To explore the relationship between macroeconomic factors and stock prices of non-life insurance companies in Nigeria.	Vector Auto regression (VAR) Analysis	GDP growth rate and interest rate positively impact stock prices, while inflation rate and exchange rate negatively impact them. Money supply has no significant effect.
Hussain (2015)	Impact of Macroeconomic Variables and Firm-Specific Characteristics on Profitability of Insurance Companies in Pakistan	To investigate the impact of macroeconomic variables and firm-specific characteristics on the profitability of insurance companies in Pakistan.	Panel Data Analysis	Macroeconomic environment, equity market conditions, and inflation positively influence insurance firms' profitability. The significance and signs of coefficients vary across different types of insurance companies.

Qudah (2013)	Factors Impacting Stock Returns in the Amman Stock Exchange	To analyze factors impacting stock returns in the Amman Stock Exchange in Jordan.	Regression Model	Balance of payments, number of employees, and company size significantly affect stock returns, while interest rate, budget deficits, gross domestic product, and inflation rate lack significant impact.
Malik & Rafique (2013)	Determinants of Commercial Bank Liquidity in Pakistan	To analyze the determinants of commercial bank liquidity in Pakistan.	Mean, Standard Deviation, Correlation, and Regression Analysis	Non-performing loans, total assets, and monetary policy interest rate positively affect bank liquidity, while inflation negatively impacts it. Financial crisis had a significant negative effect on bank liquidity.
Poontirakul (2012)	Influence of Macroeconomic Factors on Non-Life Insurance Consumption in Thailand	To investigate the influence of macroeconomic factors on non-life insurance consumption in Thailand.	Multiple Regression Analysis	Coincident index, employment rate, consumer confidence index, and export price index significantly determine non-life insurance consumption.

Pervan&PavicKramaric (2010)	Influence of Macroeconomic Factors on Performance of Non-Life Insurance Companies in Bangladesh	To explore the influence of macroeconomic factors on the performance of non-life insurance companies in Bangladesh.	Panel Data Regression Analysis	GDP growth rate, inflation rate, and interest rate significantly affect profitability, while exchange rate, unemployment rate, and investment do not have a substantial impact.
Faugere&Erlach (2003)	Impact of the Macroeconomic Environment on Insurance Companies	To examine the impact of the macroeconomic environment on insurance companies in European countries.	Regression Analysis	Population size, unemployment rate, and nominal GDP significantly impact the growth of the non-life insurance sector.

3.3 Research Gap

The existing body of literature on the impact of macroeconomic factors on the stock prices of non-life insurance companies predominantly focuses on global and regional markets like Africa, Asia, and Europe. Studies have extensively analyzed how variables such as GDP growth rate, inflation rate, interest rate, exchange rate, and various others influence the financial performance and stock prices of non-life insurance companies in these regions. Research methodologies have commonly involved quantitative analyses, such as panel data regression analysis and multiple regression analysis, to assess the impact of these macroeconomic factors.

However, there is a noticeable gap in the context of Nepal's unique economic and financial environment. The specific macroeconomic dynamics of Nepal, which may include factors unique to its economy such as remittances, tourism income, and agricultural productivity,

have not been sufficiently explored in the context of their impact on the non-life insurance sector's stock prices. Additionally, Nepal's evolving financial regulations, market maturity, and investor behaviors present a distinctive scenario that may influence the insurance sector differently compared to other countries.

Addressing these gaps can significantly contribute to the understanding of the non-life insurance sector in Nepal, offering valuable guidance for investors, policymakers, and insurance companies. It also presents an opportunity to contribute to the global literature by providing insights from an under-researched market, thereby enhancing the applicability and relevance of financial and economic theories in the context of emerging economies like Nepal.

CHAPTER III

RESEARCH METHODOLOGY

In this study the research methodology includes research design, population and sample, sources of data, data collection and processing procedure and data analysis tools and techniques.

3.1 Research Design

This study utilized a quantitative research design to investigate the factors that influence the stock prices of non-life insurance companies. A quantitative approach was chosen because it allows for the objective measurement of variables and the statistical analysis of data, which is appropriate for the research objectives of this study. While investigating the firm-specific and macroeconomic determinants of stock prices in non-life insurance companies, combination of descriptive and casual comparative research methods is suitable.

3.2 Population and Sampling Procedure

For this study, the population consists of all non-life insurance companies that are currently listed on the Nepalese Stock Exchange. These companies represent a wide range of firms in various sizes and market capitalizations, all engaging in the business of providing non-life insurance coverage, including but not limited to property insurance, liability insurance, vehicle insurance, and others. The sample are three top non-life insurance companies of Nepal i.e., Shikhar Insurance Company, Neco Insurance Company and National Insurance Company. The sample were taken on the basis of convenience sampling technique as it is easier to collect data in this sampling technique.

3.3 Nature and sources of data

The study employs secondary data as its primary source of information. Secondary data refers to data that has already been collected and processed by others, often for different research or administrative purposes. In this context, the secondary data was sourced primarily from two channels: the annual reports of the non-life insurance companies under scrutiny and the financial databases maintained by the Nepalese Stock Exchange. The data collection period for this study spans 10 fiscal years, from 2013/14 to 2022/23, according to the Bikram

Sambat calendar commonly used in Nepal. This timeframe was chosen to allow for a comprehensive review of the trends and patterns in the stock prices of non-life insurance companies and the factors influencing them.

3.4 Method of analysis

The data for this study underwent analysis using a variety of analytical tools selected based on their specific advantages and suitability for examining the collected data. The chosen methods for data analysis include descriptive statistics (such as mean and standard deviation), correlation analysis, and regression analysis. Descriptive statistics serve to provide a straightforward summary and an initial overview of the data, offering foundational insights that facilitate more advanced analyses. Central to this study are the mean, which represents the average of the dataset, and the standard deviation, which measures the dispersion of data points around the mean.

In addition to descriptive statistics, correlation and regression analyses were employed. These inferential statistical techniques are utilized to explore relationships between variables, shedding light on how various factors interrelate within the context of the study. Specifically, mean serves as a crucial measure of central tendency, offering a concise representation of the typical value within the dataset. This metric aids in understanding average stock prices of non-life insurance companies and other pivotal variables examined in this research.

Mean (μ) = $\sum x / N$

Standard Deviation: This measures the amount of variability or dispersion in a dataset. A low standard deviation indicates that values tend to be close to the mean, while a high standard deviation signifies that the values spread out over a wider range. It is useful in understanding the volatility of stock prices and other variables in this study.

SD (σ) = sqrt($\sum (x - \mu)^2 / N$)

Correlation: This analysis helps to understand the strength and direction of the relationship between two variables. In this study, it provides initial evidence of relationships between stock prices and the firm-specific and macroeconomic variables.

Formula: Correlation (r) = $\sum [(xi - \mu x)(Yi - \mu y)] / sqrt[(\sum (xi - \mu x)^2)(\sum (Yi - \mu y)^2)]$

Regression: This is an advanced analytical tool that allows for the prediction and influence of one variable on another. It helps to quantify the relationship between a dependent variable (in this case, stock prices) and one or more independent variables (firm-specific and macroeconomic factors). Multiple regression analysis, used in this study, is particularly useful as it allows for the simultaneous examination of the effects of multiple variables on stock prices.

Formula: Regression (y_{it}) = a + b1*interest rate + b2*inflation + b3* GDP+ e

3.5 Research framework and definition of variables

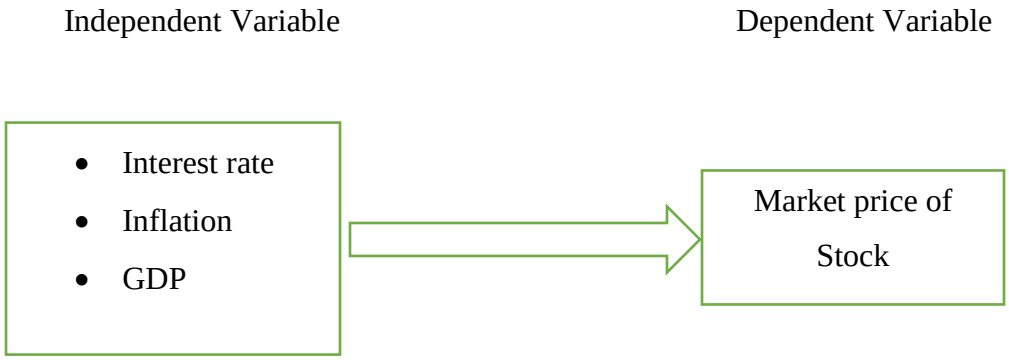

Figure 1: Research framework

(Source: Aydogan & Aydogan, 2020)

Inflation: Inflation refers to the general increase in prices of goods and services over time, resulting in a decrease in the purchasing power of a currency. In other words, inflation means that the same amount of money can buy fewer goods and services than before. It is often measured by the percentage change in the Consumer Price Index (CPI), which tracks the prices of a basket of goods and services commonly purchased by households. Inflation can be caused by various factors such as an increase in demand, a decrease in supply, changes in government policies, and fluctuations in currency exchange rates.

GDP: GDP stands for Gross Domestic Product, which is a measure of the size and health of a country's economy. GDP represents the total monetary value of all goods and services produced within a country's borders during a specific period of time, usually a year or a quarter. It includes all economic activity, including the output of businesses, government

spending, and exports minus imports. GDP is often used as an indicator of a country's standard of living and economic growth. A higher GDP generally indicates a stronger and more prosperous economy, while a lower GDP may suggest economic weakness or recession.

Interest rate: Interest Rate refers to the annual percentage rate (APR) determined by a central bank or other authoritative financial institution. This rate serves as the cost of borrowing or the return on investment over a given period, usually a year or a quarter. Data on interest rates will be collected from official publications or databases to ensure accuracy and reliability. Interest rates are critical indicators of both consumer spending and business investment, often exerting a considerable influence on stock prices, including those of non-life insurance companies. A higher interest rate generally discourages borrowing and spending, potentially leading to lower stock prices, whereas a lower interest rate usually encourages borrowing and spending, potentially boosting stock prices.

Market price of the stock: The market price of a stock, often referred to as the stock price or share price, is the price at which a single share of a company's stock is bought and sold in the financial markets. It is a critical financial metric that reflects the perceived value of a company by investors at a specific point in time.

CHAPTER IV
RESULTS AND DISCUSSION

This chapter presents the comprehensive findings of the research on "Macroeconomic Factors Affecting Stock Prices of Non-Life Insurance Companies." The study aimed to uncover the complex relationship between macroeconomic variables and the stock prices of non-life insurance firms in Nepal. Through rigorous quantitative analyses, this chapter elucidates how key macroeconomic indicators such as interest rates, inflation, and GDP influence the stock performance of these companies. The subsequent sections provide a detailed exploration of these findings, linking them with theoretical insights and empirical evidence gleaned from the literature review. This synthesis not only confirms the study's hypotheses but also offers fresh perspectives on the dynamics within Nepal's insurance sector amidst macroeconomic fluctuations. The discussion interprets these results, emphasizing their importance for investors, policymakers, and the companies themselves, and situates them within the broader economic context of Nepal.

4.1 Interest Rate

Table 4.1 shows interest rate data from 2014 to 2023, showing a range between 6% and 8%, reveals an interesting economic narrative. In 2014, the rate stood at 6%, gradually increasing to a peak of 8% by 2023. This trend exhibits key economic shifts, reflecting policy changes, market dynamics, and possibly macroeconomic factors like inflation or economic growth. The mean interest rate of 6.77% indicates an average around which these yearly rates oscillate, suggesting a general consistency in monetary policy or economic conditions across this period. The standard deviation of 0.68, while moderate, points to some variability in economic conditions year-on-year. It's not wide enough to suggest extreme volatility but does highlight the presence of economic cycles or shifts in monetary policy. The coefficient of variation at 10% reinforces the idea of relative stability in interest rates during this period. Despite some fluctuations, this level of variation suggests an underlying predictability in interest rate trends, important for long-term financial planning and investment decisions.

For sectors like non-life insurance, where investment income can significantly influence profitability, understanding these interest rate trends is crucial. These companies often hold

large investment portfolios, and their return on these investments can be sensitive to changes in interest rates.

Table 4.1

Interest rate

Year	**Interest Rate (%)**
2014	6
2015	6.5
2015	6.5
2017	7
2018	7.5
2019	7.5
2020	6.5
2021	6
2022	7
2023	8
Mean	6.77
SD	0.68
CV	0.10

(Source: Nepal Rastra Bank)

As interest rates rise, the return on fixed-income investments typically increases, potentially boosting the investment income of these companies. Conversely, falling interest rates can squeeze investment returns. Furthermore, the insurance industry's liability structure, often long-term in nature, means that fluctuations in interest rates can have complex effects on their balance sheets.

In the broader economic context, interest rates are a key tool for central banks to manage economic growth and inflation. Lower interest rates generally stimulate economic activity by making borrowing cheaper, potentially increasing consumer spending and investment. Higher interest rates, on the other hand, can cool down an overheated economy and control inflation. These macroeconomic dynamics, in turn, influence stock markets, including the stocks of non-life insurance companies. Investors often react to interest rate changes, adjusting their portfolios based on anticipated effects on different sectors. In the case of non-life insurance companies, the dual impact of interest rates on both their investment income

and the broader economic environment makes understanding these trends particularly pertinent.

This detailed analysis of interest rate trends from 2014 to 2023 provides valuable insights into the economic landscape of the past decade. It highlights the importance of macroeconomic factors in financial decision-making and investment strategies, especially in sectors like insurance, where the interplay between interest rates and financial performance can be significant.

4.2 Inflation Rate

The inflation rate data from 2014 to 2023 as shown in table 4.2 reveals a complex economic story marked by significant fluctuations. Starting at a modest 4.09% in 2014, the rate shows a gradual upward trajectory, peaking at 9.46% in 2023. This pattern is not linear but characterized by notable year-to-year variations. The mean inflation rate over these years is 6.69%, which gives a central tendency around which the annual rates fluctuate.

Table 4.2

Inflation rate

Year	**Inflation Rate**
2014	4.09%
2015	5.05%
2016	5.57%
2017	4.06%
2018	3.63%
2019	8.79%
2020	7.87%
2021	8.36%
2022	7.74%
2023	7.94%
Mean	6.69%
SD	2.23%
CV	0.33

(Source: Nepal Rastra Bank)

A Upon closer examination, the standard deviation, which stands at 2.23%, indicates a significant degree of variability in these annual inflation rates. This variability suggests that

inflation rates were influenced by a diverse range of economic factors throughout the decade. Further emphasizing this volatility, the coefficient of variation at 33% underscores the extent of these fluctuations, highlighting the inherent unpredictability in inflation rates during this period.

Several factors likely contributed to this volatility. Macroeconomic policies, including decisions on fiscal and monetary measures, played pivotal roles in shaping inflation trends. For example, adjustments in interest rates, government spending, and taxation policies could all sway inflation rates. Externally, global economic conditions, fluctuations in oil prices, and shifts in international trade dynamics also exerted influence on domestic inflation. The period from 2014 to 2023 witnessed various global economic events, including changes in trade policies and geopolitical shifts, which likely impacted inflation rates.

Domestically, factors such as disruptions in supply chains, shifts in consumer demand patterns, and dynamics within the labor market could have further contributed to inflation fluctuations. The latter half of the decade, particularly from 2018 to 2023, saw elevated inflation rates, possibly influenced by specific events or policies unique to that timeframe. Factors such as post-recession economic recovery efforts, fluctuations in energy prices, and changes in consumer behavior might have all contributed to the observed higher inflation rates during these years.

Understanding these inflation trends holds critical importance, particularly for sectors sensitive to changes in purchasing power and living costs, such as consumer goods, real estate, and finance. For non-life insurance companies, inflation impacts both costs, such as claims expenses, and revenues, including premium income. Inflationary pressures can elevate claim costs due to increased costs of repairs and healthcare services, while insurers may adjust premiums to account for higher risks associated with inflation. Furthermore, inflation influences investment returns, as non-life insurers often maintain substantial portfolios in fixed-income securities, whose returns are affected by inflation rates.

The inflation rate data spanning 2014 to 2023 offers valuable insights into the economic dynamics of the decade. These insights are indispensable for policymakers, investors, and companies alike in making informed decisions and preparing for future economic scenarios. Understanding the underlying factors driving these inflation trends is essential for

anticipating future economic conditions and their potential impacts across various sectors of the economy.

4.3 GDP (Gross Domestic Product)

The GDP data from table 4.3 ranging 2014 to 2023, depicting an increase from $22.16 billion to $40.83 billion, illustrates a significant growth trajectory in the economy. The average GDP of $30.12 billion over this period indicates a consistent expansion, with a standard deviation of $6.51 billion signifying notable yearly variations. This growth can be linked to a range of factors such as evolving domestic economic policies, fluctuating global market conditions, advances in technology, and changes in international trade. The slight decrease in 2021 likely reflects the global impact of the COVID-19 pandemic, which disrupted economic activities worldwide. This period saw shifts in consumer behavior, interruptions in supply chains, and significant governmental interventions in the form of stimulus packages and monetary policy adjustments. The recovery in subsequent years hints at the resilience of the economy and the effectiveness of these interventions.

Table 4.3

GDP

Year	**GDP (in $billion)**
2014	22.16
2015	22.73
2016	24.36
2017	24.52
2018	28.97
2019	33.11
2020	34.19
2021	33.43
2022	36.92
2023	40.83
Mean	30.12
SD	6.51
CV	0.22

(Source: Nepal Rastra Bank)

Understanding GDP trends is crucial, especially for sectors such as non-life insurance, which closely follow economic conditions. Economic growth typically correlates with increased business activities and consumer spending, which in turn can drive up demand for insurance products. Moreover, a thriving economy can enhance investment returns for these companies, given their investments often mirror economic performance. However, these trends also signal varying risk environments. For instance, rapid growth phases or economic downturns may alter claim patterns and pose new investment risks for non-life insurers.

Furthermore, GDP trends serve as indicators of overall economic health and consumer confidence, both pivotal for insurance market dynamics. During periods of economic expansion, businesses and individuals tend to increase investments in insurance coverage, anticipating future growth and safeguarding their assets. Conversely, economic contractions may prompt cost-cutting measures, including reductions in insurance expenditures, potentially impacting insurers' revenues.

The decade's GDP data provides critical insights into the economic backdrop, offering essential context for assessing market conditions and making informed business decisions. For non-life insurance firms, these insights are particularly valuable as they inform strategic planning, pricing strategies, and investment decisions aligned with economic cycles. A comprehensive understanding of GDP trends, their drivers, and implications is indispensable for stakeholders seeking to navigate and capitalize on broader economic movements effectively.

4.4 MPS (Market Price of Stock) Nepal insurance

The market price is the result of the interaction of traders, investors, and dealers in the stock market. The Market Price of Stock (MPS) is shown in table 4.4 for Nepal Insurance from 2014 to 2023 is characterized by significant volatility. The stock price shows dramatic fluctuations, starting at 620 in 2014 and reaching a high of 900 in 2018, followed by considerable variations and settling at 650 in 2023. The average stock price over this period is 764, with a high standard deviation of 101, indicating wide-ranging fluctuations, as further highlighted by a coefficient of variation of 13%. These fluctuations can be attributed to a combination of internal and external factors. Internally, company-specific developments such

as financial performance, strategic decisions, leadership changes, and news about new products or services can significantly influence investor perceptions and, consequently, the stock price. Externally, broader market trends, economic conditions, regulatory changes, and sector-specific developments play a crucial role. For instance, changes in economic policies, shifts in the insurance sector & regulatory environment, or broader market downturns and upswings can all impact the stock price.

Table 4.4

MPS (Market Price of Stock) of Nepal insurance

Year	**Nepal insurance**
2014	620
2015	650
2016	720
2017	830
2018	900
2019	780
2020	850
2021	880
2022	760
2023	650
Mean	764
SD	101.46
CV	13.28

(Source: Annual report of Nepal insurance company limited)

The peak in In 2018, the notable upswing in performance for Nepal Insurance could stem from a particularly strong period for the company, favorable conditions within the insurance sector, or a bullish overall stock market. Conversely, the subsequent decline post-2018 might be attributed to market corrections, shifts in investor sentiment, or specific challenges facing the company or its industry. The fluctuating pattern observed in the following years suggests a responsive market influenced by diverse signals originating both internally within the company and externally from the broader economic and sectoral environment.

This analysis underscores the dynamic nature of stock markets, where prices are shaped by a multitude of factors. For investors and analysts alike, comprehending these price movements is essential as it provides insights not only into the health and performance of individual companies but also into broader market and economic trends. For entities like Nepal Insurance, these fluctuations in stock prices can significantly impact market valuation, investor relations, and strategic decision-making.

The decade-long dataset of Nepal Insurance's Market Price of Shares (MPS) encapsulates the intricate interplay between internal dynamics and external economic influences, highlighting the multifaceted process of determining stock prices in financial markets.

4.5 MPS (Market Price of Stock) of Neco insurance

Significant changes are seen in the Table 4.5 MPS (Market Price of Stock) data for Neco Insurance from 2014 to 2023, suggesting a stock market environment that is active and responsive. During a period of tremendous growth, which began at 350 in 2014, there was a tremendous spike to 900 in 2022. This peak was followed by a series of notable fluctuations, with the price eventually settling at 850 in 2023. The mean price of 635.69, coupled with a high standard deviation of 202.83, underscores the wide variability in stock prices, as emphasized by a coefficient of variation of 31.94%.

Table 4.5

MPS (Market Price of Stock) of Neco insurance

Year	**Neco insurance**
2014	350
2015	400
2016	450
2017	500
2018	600
2019	700
2020	750
2021	850
2022	900
2023	850
Mean	635
SD	202.83
CV	31.94

(Source: Annual report of Necoinsurance company limited)

These fluctuations can be attributed to a variety of factors. Internal company performance is a key driver, where financial results, strategic initiatives, and management changes can significantly influence investor confidence and, consequently, stock prices. For instance, periods of strong financial performance or successful implementation of strategic initiatives likely contribute to the stock's surge, while challenges in these areas may lead to declines.

Sector-specific trends also play a crucial role. The insurance sector is influenced by various macroeconomic factors, regulatory changes, and market dynamics, all of which can impact stock prices. For example, regulatory changes affecting the insurance industry or shifts in market dynamics, such as increased competition or changes in consumer behavior, can have a significant impact on the company's stock. Broader economic conditions are another critical factor. Economic growth, interest rates, inflation, and global economic events can all influence investor sentiment and behavior, impacting stock prices. For example, an economic

downturn may lead to a decrease in stock prices due to reduced investor confidence, while a booming economy might boost stock prices.

Furthermore, global events such as financial crises, geopolitical tensions, or pandemics can lead to increased market volatility. For example, the COVID-19 pandemic brought significant uncertainty and volatility to global markets, impacting stock prices across various sectors, including insurance. Investor behavior, driven by these internal, sector-specific, and broader economic factors, reflects the dynamic nature of the stock market. Investor perceptions, risk tolerance, and speculative activities can all contribute to the fluctuations observed in the MPS data. For instance, periods of high investor confidence may lead to increased demand for the stock, driving up prices, while periods of uncertainty or negative sentiment can lead to selling pressure and reduced prices.

Ultimately, the Neco Insurance's decade-long MPS data reflects an intricate interaction between internal factors, sector-specific factors, and external economic forces. This analysis emphasizes the complex and diverse aspects of stock price determination and the significance of a thorough comprehension of these components for investors, analysts, and corporate management. Gaining insight into these patterns and their fundamental origins is essential for making well-informed financial choices and strategic preparations.

4.6 MPS (Market Price of Stock) of Shikhar insurance

The market price of stock (MPS) for Shikhar Insurance from 2014 to 2023, as shown in Table 4.6, exhibits substantial volatility. The price initiates with a low value of 0 in 2014, experiences a significant increase to reach a peak of 941 in 2022, and then demonstrates substantial volatility, before settling at 681.50 in 2023. The path leads to an average price of 642. The extreme variation in stock prices is highlighted by a high standard deviation of 346.37 and a coefficient of variation of 53.8, indicating a highly volatile market environment.

Table 4.6

MPS (Market Price of Stock) of Shikhar Insurance

Year	**Shikhar Insurance**
2014	0
2015	0
2016	700
2017	800
2018	860
2019	852
2020	771
2021	850
2022	914
2023	681.50
Mean	642
SD	346.37
CV	53.88

(Source: Annual report of Shikhar insurance company limited)

These fluctuations in Shikhar Insurance's stock price can be attributed to a variety of factors. Internal company performance, encompassing financial results, strategic decisions, and operational efficiency, significantly influences investor perception and the valuation of the stock. The peak observed in 2018 likely reflects either a particularly successful year for the company or a period of favorable market sentiment towards the insurance sector.

Industry-specific trends also play a crucial role. The insurance industry is influenced by regulatory changes, competitive dynamics, and technological advancements, among other factors. Shifts such as regulatory updates or changes in consumer preferences can have substantial effects on stock prices.

Broader economic conditions, including GDP growth, inflation rates, and overall market health, contribute significantly as well. Economic downturns, global financial crises, or periods of economic prosperity can directly impact stock prices. Thus, the fluctuations in

Shikhar Insurance's stock price may reflect the broader economic environment during the analyzed period.

Market sentiment, driven by investor behavior and expectations, constitutes another vital factor. Investor reactions to news whether positive or negative about the company or the market at large can lead to rapid fluctuations in stock prices. Speculative trading, market trends, and investor confidence collectively contribute to the dynamic nature of stock prices.

In summary, Shikhar Insurance's stock performance over the past decade has been influenced by a multitude of factors, including internal dynamics, industry-specific issues, general economic conditions, and market sentiment, as revealed by the MPS data. The stock market, as demonstrated by this data, is complex and unpredictable, underscoring the importance for investors and corporate managers alike to maintain a comprehensive understanding of these various factors.

4.7 Correlation analysis

Correlation analysis examines the statistical relationships between pairs of variables in the study. It involves calculating correlation coefficients, such as Pearson's or Spearman's, to assess the strength and direction of these relationships. The results of the correlation analysis reveal how macroeconomic factors correlate with the stock prices of non-life insurance companies. This section interprets the magnitude and significance of these correlations in the context of the research question, providing insights into potential causal relationships or dependencies among the studied variables.

Table 4.7

Correlation analysis

	Nepal insurance	Neco Insurance	Shikhar Insurance	Interest Rate (%)	Inflation Rate	GDP (in $billion)
Nepal insurance	1					
Neco Insurance	.784**	1				
	0.007					
Shikhar Insurance	0.589	0.238	1			
	0.073	0.509				
Interest Rate (%)	0.46	0.416	0.445	1		
	0.018	0.232	0.197			
Inflation Rate	-0.314	-0.087	0.354	0.276	1	
	0.376	0.812	0.316	0.44		
GDP (in $billion)	-0.001	0.025	0.623	0.532	.879**	1
	0.997	0.946	0.054	0.114	0.001	

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

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

Table 4.7 correlation analysis between stock prices of Nepal Insurance, Neco Insurance, Shikhar Insurance, and macroeconomic factors.“*” shows significance level of the variables. The analysis reveals significant insights into the financial market dynamics. The significant correlation between Nepal and Neco Insurance suggests that these companies' stock prices are influenced by similar factors, possibly due to their alignment with sector-specific trends or parallel reactions to market conditions. Shikhar Insurance, however, demonstrates weaker correlations with the other two, indicating unique factors influencing its stock price, which may include company-specific strategies or differing market positions.

Interest rates show a non-significant positive correlation with all three companies, suggesting that higher interest rates might be favorable for these stocks. This could be attributed to the potential for increased investment returns in a higher interest rate environment or investor perceptions linking interest rates with economic health.

The inflation rate presents a mixed picture. Its negative correlation with Nepal Insurance implies that increasing inflation might adversely affect its stock, possibly due to concerns over increased operational costs or reduced consumer spending power affecting the insurance sector. On the other hand, the weak positive correlation with Shikhar Insurance suggests a different impact, where inflation might slightly favor its stock, potentially due to specific company strategies or market positioning that mitigate inflationary impacts.

GDP shows a distinct relationship with these companies. The significant positive correlation with Shikhar Insurance indicates that its stock is particularly sensitive to economic growth, implying that the company's performance is closely tied to overall economic conditions. Conversely, the negligible relationship with Nepal Insurance suggests its stock is less affected by GDP changes, which could be due to a diverse range of products, market strategies, or a customer base that is less sensitive to economic fluctuations.

This analysis demonstrates the nuanced and complex interplay between stock prices of insurance companies and macroeconomic indicators. It highlights how market dynamics, company-specific factors, and broader economic conditions collectively shape the stock market behavior. Understanding these relationships is crucial for investors and analysts, as it aids in making informed decisions based on economic trends and company performance within the broader financial landscape.

4.8 Regression analysis

Regression analysis involve applying statistical methods to understand the relationship between a dependent variable and one or more independent variables. In this context, the regression analysis might be used to explore how macroeconomic factors (independent variables) predict the stock prices of non-life insurance companies (dependent variable) in Nepal. This section would discuss the regression model used, the results of the analysis including coefficients and their significance, and interpret these findings in the context of the research question. It's essential for identifying and quantifying the impact of each macroeconomic factor on stock prices.

4.8.1 Regression Analysis of Nepal Insurance Company Limited

Table 4.8

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.709[a]	.502	.253	348.2689

a. Predictors: (Constant), GDP (in $billion), Interest Rate (%), Inflation Rate

The regression analysis as shown in table 4.8 for Nepal Insurance Company Limited shows an R value of 0.709, indicating a moderately strong correlation between the predictors (GDP, Interest Rate, Inflation Rate) and the dependent variable. The R Square value of 0.502 means about 50.2% of the variation in the dependent variable is explained by the model. The Adjusted R Square of 0.253, however, is considerably lower, suggesting the model may be less predictive when applied to other data. The standard error of the estimate is 348.2689, reflecting the average distance of the data points from the regression line.

Table 4.9

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	733528.114	3	244509.371	2.016	.213[b]
	Residual	727747.535	6	121291.256		
	Total	1461275.649	9			

a. Dependent Variable: Nepal insurance

b. Predictors: (Constant), GDP (in $billion), Interest Rate (%), Inflation Rate

The ANOVA table 4.9 for the regression analysis of Nepal Insurance shows that the regression model is not statistically significant. The F-statistic of 2.016 and a significance value (Sig.) of 0.213 indicate that the model does not reliably predict the dependent variable based on the independent variables (GDP, Interest Rate, Inflation Rate). This is evidenced by the Sig. value being greater than the common alpha level of 0.05. The Sum of Squares for

regression and residual indicate the variability explained by the model and the unexplained variability, respectively.

Table 4.10

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	960.140	1221.846		-.786	.462
	Interest Rate (%)	212.770	232.798	.353	.914	.396
	Inflation Rate	-187.629	119.022	-1.083	-1.576	.166
	GDP (in $billion)	47.248	48.260	.763	.979	.365

a. Dependent Variable: Nepal insurance

The coefficients table 4.10 from the regression analysis of Nepal Insurance indicate that the Interest Rate has a positive but not statistically significant effect on the dependent variable (Sig. 0.396), as does the GDP (Sig. 0.365). The Inflation Rate has a negative effect, closer to statistical significance (Sig. 0.166) but still above the common alpha level of 0.05. The constant term also is not significant (Sig. 0.462). These results suggest that while there are tendencies in how these factors affect Nepal Insurance, the model does not provide statistically significant predictions.

The regression analysis for Nepal Insurance Company Limited reveals a moderate correlation between stock price and macroeconomic factors (R = 0.709). However, the model explains only 50.2% of the variance (R Square = 0.502), and its predictive power is lower (Adjusted R Square = 0.253). The ANOVA indicates the model is not statistically significant (F = 2.016, Sig. = 0.213). The coefficients show Interest Rate and GDP have positive, yet non-significant, effects on the stock price, while Inflation Rate has a negative, non-significant impact. Overall, the model suggests tendencies but lacks statistical significance in predicting stock price movements based on these macroeconomic factors.

4.8.2 Regression Analysis of Neco Insurance Company Limited

Table 4.11

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.476a	.227	-.160	552.883

a. Predictors: (Constant), GDP (in $billion), Interest Rate (%), Inflation Rate

Table 4.11 present model summary of regression analysis for Neco Insurance Company Limited shows an R value of 0.476, indicating a moderate correlation between the model's predictors and the dependent variable. However, the R Square value of 0.227 suggests that only about 22.7% of the variability in the dependent variable is explained by the model. The negative Adjusted R Square of -0.160 indicates that the model may not be a good fit and could perform poorly when predicting new data. The standard error of the estimate is relatively high at 552.883.

Table 4.12

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	537380.251	3	179126.750	.586	.646[b]
	Residual	1834080.649	6	305680.108		
	Total	2371460.900	9			

a. Dependent Variable: Neco insurance

b. Predictors: (Constant), GDP (in $billion), Interest Rate (%), Inflation Rate

The ANOVA for the regression analysis of Neco Insurance as shown in table 4.12 indicates that the model does not significantly predict the dependent variable. This is evidenced by an F-statistic of 0.586 and a high significance value (Sig.) of 0.646, well above the commonly used alpha level of 0.05. The Sum of Squares for regression indicates the variation explained by the model, which appears to be insufficient compared to the residual, or unexplained variation.

The regression coefficients for Neco Insurance show that none of the variables (Interest Rate, Inflation Rate, GDP) significantly predict the stock price. The constant is also not significant (Sig. 0.489). Interest Rate has a positive but not significant coefficient (Sig. 0.289). Inflation Rate has an insignificant negative effect (Sig. 0.994), and GDP has a negative coefficient, also not significant (Sig. 0.793). These findings suggest that these macroeconomic factors, in this model, do not have a statistically significant impact on Neco Insurance's stock price.

Table 4.13

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1430.347	1939.703		-.737	.489
	Interest Rate (%)	429.350	369.571	.559	1.162	.289
	Inflation Rate	-1.552	188.950	-.007	-.008	.994
	GDP (in $billion)	-21.000	76.614	-.266	-.274	.793

a. Dependent Variable: Neco insurance

The regression analysis for Neco Insurance in table 4.13shows a moderate correlation (R = 0.476) but explains only a small portion of the variance (R Square = 0.227). The negative Adjusted R Square (-0.160) suggests the model may not be reliable for predictions. ANOVA results indicate the model is not statistically significant (F = 0.586, Sig. = 0.646). The coefficients for Interest Rate, Inflation Rate, and GDP are not significant predictors of the stock price, underlining that these macroeconomic factors do not significantly impact Neco Insurance's stock in this model.

4.8.3 Regression Analysis of Shikhar Insurance Company Limited

The regression analysis for Shikhar Insurance Company Limited, as shown in table 4.13, reveals a significant R value of 0.747, showing a robust association between the predictors

and the dependent variable. The R Square score of 0.558 indicates that around 55.8% of the variation in the dependent variable can be accounted for by the model. Nevertheless, the Adjusted R Square value of 0.337, albeit positive, is considerably lower than the R Square value. This suggests that the model's ability to predict outcomes may decrease when applied to other sets of data. The estimate has a standard error of 575.32135.

Table 4.14

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.747[a]	.558	.337	575.32135

a. Predictors: (Constant), GDP (in $billion), Interest Rate (%), Inflation Rate

The ANOVA table 4.15 of the regression analysis of Shikhar Insurance shows that the model, including GDP, Interest Rate, and Inflation Rate as predictors, does not significantly predict the dependent variable. This is indicated by an F-statistic of 2.525 and a significance (Sig.) value of 0.154, which is above the typical alpha level of 0.05 used for statistical significance. The Sum of Squares for regression and residual represent the variation explained by the model and the unexplained variation, respectively.

Table 4.15

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2507431.854	3	835810.618	2.525	.154[b]
	Residual	1985967.917	6	330994.653		
	Total	4493399.771	9			

a. Dependent Variable: Shikhar insurance

b. Predictors: (Constant), GDP (in $billion), Interest Rate (%), Inflation Rate

The regression coefficients as shown in table 4.16 for Shikhar Insurance show that the constant and the coefficients for Interest Rate and Inflation Rate are not statistically

significant. The GDP shows a potentially significant positive effect (Sig. 0.089), close to the conventional alpha level of 0.05. This suggests that GDP growth might have a more substantial impact on Shikhar Insurance's stock price compared to changes in interest and inflation rates. However, due to the high p-values for the constant and other coefficients, the overall predictive power of the model remains questionable.

Table 4.16

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1561.789	2018.423		-.774	.468
	Interest Rate (%)	-93.418	384.569	-.088	-.243	.816
	Inflation Rate	-282.316	196.618	-.929	-1.436	.201
	GDP (in $billion)	161.413	79.723	1.487	2.025	.089

a. Dependent Variable: Shikhar insurance

The regression analysis for Shikhar Insurance shows a strong correlation (R = 0.747) with predictors GDP, Interest Rate, and Inflation Rate. The model explains 55.8% of variance (R Square = 0.558) but has a lower predictive power (Adjusted R Square = 0.337). ANOVA results suggest non-significance (F = 2.525, Sig. = 0.154). The coefficients reveal that GDP may have a notable positive impact on the stock price (Sig. = 0.089), while Interest Rate and Inflation Rate are not significant predictors. The model's overall predictive reliability is questionable due to high p-values for other variables.

4.9 Summary of Hypothesis

As shown in table 4.16 the study's hypothesis testing reveals that interest rates do not significantly impact stock prices in Nepal's non-life insurance sector. Inflation rates have a borderline significant impact on Nepal Insurance but are not significant for Neco and Shikhar Insurance. GDP shows a potentially notable impact on Shikhar Insurance's stock price but not on Nepal and Neco Insurance. These findings indicate that while certain macroeconomic

factors like GDP may influence specific companies, their overall impact on the sector's stock prices is not uniform or consistently significant.

Table 4.17

Summary of hypothesis

Hypothesis	**P Value**	**Result**
H1: Interest rate has a significant impact on the stock prices of non-life insurance companies.	0.816,0.289,0.396	Not supported
H2: Inflation has a significant impact on the stock prices of non-life insurance companies.	0.201, 0.994, 0.116	Not supported
H3: GDP has a significant impact on the stock prices of non-life insurance companies.	0.089,0.793,0.365	Not supported

4.10 Discussion

By contrasting the results of this study with those of earlier research, it is possible to see that the effects of macroeconomic factors on non-life insurance companies are not uniform. Research conducted in Africa, such as that conducted by Msomi (2023) and Olugbenga & Obisesan (2023), has shed light on the firm-specific and macroeconomic factors that have an adverse impact on overall financial performance. Anggraini and Susanti (2020) and Aydogan and Aydogan (2020) discovered that the Gross Domestic Product (GDP) and interest rate had a positive impact on stock prices in Indonesia and Turkey, respectively, whereas inflation had a combination of positive and negative effects. These findings are somewhat supported by the findings of this study, which demonstrate that GDP has an impact on Shikhar Insurance but not on Nepal and Neco Insurance, and that interest rates and inflation have a non-significant impact on all three enterprises. This shows that the relationship between macroeconomic conditions and non-life insurance stock prices is influenced by geographical variances as well as local market dynamics.

CHAPTER V

SUMMARY AND CONCLUSION

5.1 Summary

The research endeavors to analyze historical data using statistical tools to uncover patterns and correlations between macroeconomic indicators and stock performance. This analysis is crucial for investors, policymakers, and companies alike, offering insights into the factors that drive stock market valuations within the non-life insurance sector.

The problem statement addresses the existing gap in understanding the specific impact of macroeconomic variables on the stock prices of non-life insurance companies. The study aims to fill this gap by investigating how macroeconomic factors affect both the operational and financial performance of these companies, as well as their influence on investor perception and market dynamics.

Key objectives include examining the relationship between a country's macroeconomic factors and the stock prices of non-life insurance companies, and assessing the direct impact of these factors on stock prices. The research methodology employs a quantitative research design, detailing sampling procedures, data sources, and analytical tools such as descriptive statistics, correlation analysis, and regression analysis.

Findings from the study on macroeconomic factors affecting stock prices of non-life insurance companies in Nepal indicate a gradual upward trend in interest rates from 2014 to 2023, with fluctuations suggesting overall stability. Inflation rates exhibited significant variability, highlighting their unpredictability and volatility over the period. GDP data showed consistent economic growth, albeit with some variations, indicating resilience in the economy. Market Price of Stock (MPS) for companies like Nepal Insurance, Neco, and Shikhar Insurance displayed high volatility, reflecting sensitivity to both internal corporate dynamics and external economic factors.

Correlation analysis revealed diverse relationships between these companies' stock prices and macroeconomic indicators. However, regression analyses indicated that many of these relationships lacked statistical significance, implying complexities in how macroeconomic factors impact stock prices. These findings provide a nuanced economic portrait of Nepal,

where stable interest rate trends reflect prudent monetary policy crucial for financial planning. Meanwhile, volatile inflation rates signal economic uncertainties affecting investment and consumer behavior. The steady GDP growth underscores economic resilience, offering a favorable backdrop for long-term business strategies.

The observed volatility in MPS across insurance companies underscores the market's sensitivity to internal and external economic shifts. While correlation and regression analyses highlight intricate links between stock prices and macroeconomic factors, the lack of statistical significance in several instances suggests these relationships are multifaceted and possibly moderated by other variables or industry-specific dynamics. This complexity underscores the need for a thoughtful approach in applying these insights to investment strategies and policy decisions.

5.2 Conclusion

The research aims to analyze historical data using statistical tools to uncover patterns and correlations between macroeconomic indicators and stock performance. This analysis is vital for investors, policymakers, and companies, offering valuable insights into the factors that influence stock market valuations within the non-life insurance sector.

The problem statement addresses a significant gap in understanding the specific impact of macroeconomic variables on the stock prices of non-life insurance companies. The study seeks to bridge this gap by exploring how macroeconomic factors influence both the operational and financial performance of these firms, as well as their impact on investor perceptions and market dynamics.

Key objectives include examining the relationship between a country's macroeconomic factors and the stock prices of non-life insurance companies, and evaluating the direct impact of these factors on stock prices. The research methodology employs a quantitative approach, detailing sampling procedures, data sources, and analytical tools such as descriptive statistics, correlation analysis, and regression analysis.

Findings from the study on macroeconomic factors affecting stock prices of non-life insurance companies in Nepal reveal a gradual upward trend in interest rates from 2014 to 2023, with fluctuations indicating overall stability. Inflation rates showed significant

variability, underscoring their unpredictability and volatility over the period. GDP data demonstrated consistent economic growth, albeit with some fluctuations, highlighting the economy's resilience. Market Price of Stock (MPS) for companies like Nepal Insurance, Neco, and Shikhar Insurance exhibited high volatility, reflecting sensitivity to both internal corporate dynamics and external economic factors.

Correlation analysis identified diverse relationships between these companies' stock prices and macroeconomic indicators. However, regression analyses suggested that many of these relationships lacked statistical significance, indicating complexities in how macroeconomic factors impact stock prices. These findings provide a nuanced economic overview of Nepal, where stable interest rate trends indicate prudent monetary policy essential for financial planning. Meanwhile, volatile inflation rates signal economic uncertainties influencing investment decisions and consumer behavior. The steady GDP growth underscores economic stability, providing a favorable environment for long-term business strategies.

The observed volatility in MPS among insurance companies highlights the market's responsiveness to internal and external economic shifts. While correlation and regression analyses reveal intricate connections between stock prices and macroeconomic factors, the lack of statistical significance in some instances suggests these relationships are multifaceted and possibly influenced by other variables or industry-specific dynamics. This complexity emphasizes the need for a thoughtful approach when applying these insights to investment strategies and policy decisions.

5.3 Implications

The implications that are derived from this study are as follows.

I. Macroeconomic Influences: The study deepens understanding of how broader economic factors like interest rates and GDP trends affect non-life insurance stock prices, offering insights into sector-specific financial dynamics.
II. Interest Rate Trends: It highlights how interest rate fluctuations influence investment strategies in the insurance sector, impacting returns and risk management.

III. Inflation Volatility: The research emphasizes the challenges posed by inflation's variability, affecting pricing strategies and cost management in insurance.

IV. GDP Fluctuations: It shows the correlation between GDP changes and the growth and stability of the insurance sector.

V. Sensitivity to Economic Shifts: The study uncovers the vulnerability of insurance stocks to both internal operational changes and wider economic trends.

VI. Need for Further Research: It calls for more detailed studies to unravel the complex interactions between economic factors and the insurance market.

VII. Financial Planning: The findings suggest a need for nuanced, informed financial planning approaches within the insurance industry.

VIII. Adaptive Strategies: The study underscores the importance of flexible business strategies to navigate economic unpredictability.

IX. Policy Framework: It provides valuable insights for policymakers to better comprehend and manage insurance market dynamics.

X. Investor Guidance: The research aids investors in making more informed decisions by understanding the economic trends affecting the insurance sector.

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CHAPTER I INTRODUCTION 1.1Background of the study The stock market is a complex and structured ecosystem where individuals and institutions engage in the trading of stocks, bonds, and other financial securities (Mishkin & Eakins, 2018). It acts as an essential platform for companies aiming to obtain capital and for investors seeking investment opportunities. Companies raise funds to support their operations, expansions, or new projects by issuing shares. This initial sale of shares to the public is called an Initial Public Offering (IPO). Investors buy these shares with the expectation of gaining returns, either through the increase in the stock's value or through dividends, which are a portion of the company's profits distributed to shareholders. The stock market is not a single entity but a network of markets and exchanges where stocks and other securities are bought and sold. Major stock exchanges include the New York Stock Exchange (NYSE) and Nasdaq in the United States, among others globally. These exchanges serve as marketplaces for trading stocks and provide a regulated and secure environment for such transactions (Mishkin & Eakins, 2018). Often seen as an economic indicator, the stock market reflects the health of an economy. A strong stock market typically signals business optimism and economic growth, while a declining market may indicate economic slowdowns or recessions (Professor et al., 2017). Investing in the stock market involves balancing risk and return. Stocks offer the potential for higher returns compared to other investments like bonds or savings accounts, but they also come with higher risks. Market volatility, economic changes, and company-specific factors can all impact stock prices. According to Brigham and Ehrhardt (2016), the stock price represents the current market value at which an individual share of a company's stock is traded on a stock exchange. The valuation of stocks is influenced by