

# **STOCK PRICE BEHAVIOR OF LISTED INSURANCE COMPANIES IN NEPAL**

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

By

Sokrin Maharjan

Campus Roll No: 3862/075

Exam Roll No: 14113/19

Registration No: 7-2-927-38-2014

Shanker Dev Campus

Group: Finance

Kathmandu, Nepal

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## CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “**Stock Price Behavior of Listed Insurance Companies in Nepal**”. The work of this dissertation has not been submitted previously for the purpose of conferral of any degree nor it has been proposed and presented as part of requirements for any other academic purposes.

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

Sokrin Maharjan

Date

### REPORT OF RESEARCH COMMITTEE

Mr. Sokrin Maharjan has defended research proposal entitled **Stock Price Behavior of Listed Insurance Companies in Nepal** successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Dr. Pitri Raj Adhikari and submit the dissertation for evaluation and viva voce examination.

.....  
Dr. Pitri Raj Adhikari  
Dissertation Supervisor

Dissertation Proposal Defended Date:

.....

Dissertation Submitted Date :

.....

.....  
Asso. Prof. Dr. Sajeeb Kumar Shrestha  
Research Department

Dissertation Viva-voce Date:

.....

**APPROVAL SHEET**

We have examined the dissertation entitled “**Stock Price Behavior of Listed Insurance Companies in Nepal**” presented by Sokrin Maharjan, a candidate for the degree of Masters of Business Studies (MBS). We hereby certify that the dissertation is acceptable for the award of degree.

.....  
Dr. Pitri Raj Adhikari  
Dissertation Supervisor

.....  
Internal Examiner

.....  
Internal Expert

.....  
External Expert

.....  
Asso. Prof. Dr. Sajeep Kumar Shrestha  
Chairperson, Research Committee

.....  
Campus Chief

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This dissertation entitled “**Stock Price Behavior of Listed Insurance Companies in Nepal**” has been prepared for the partial fulfillment of the requirement for the Master's Degree under Tribhuvan University, Nepal. It aims to analyze the stock price behavior of stock of commercial Banks in Nepal. This research study how the independent variables such as interest income, interest expenses, net profit, retained earnings, earning per share, dividend payout ratio affects the dependent variable market price per share of commercial banks in Nepal.

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## ABBREVIATIONS

ALIC:	Asian life insurance
BVPS:	Book Value per Share
CV:	Coefficient of Variance
DPS:	Dividend Per Share
EPS:	Earnings Per Share
FY:	Fiscal Year
GDP:	Gross Domestic Product
LIC:	Life insurance corporation
MPS:	Market Price Per Share
NEPSE:	Nepal Stock Exchange
NLG:	NLG insurance company
NLICN:	Nepal life insurance company
PE:	Price Earnings ratio
RE:	Retained Earnings
ROE:	Return on Equity
SD:	Standard Deviation
SEBON:	Securities Board of Nepal
SICL:	Shikhar insurance company

## ABSTRACT

The objective of the study is to determine the stock price behavior of listed insurance companies in Nepal based on firm specific financial indicators and macroeconomic variables such as EPS, return on equity, dividend payout, market to book value and PE and inflation rate, GDP rate, interest rate as independent variables. Out of 12 listed life and non-life insurance companies, three life and 2 non-life listed companies have been selected for the fiscal year 2070/71 to 2079/80. The study applies descriptive and casual comparative research design focusing on purposive sampling model. Financial tool and statistical tools are used as research methodology to find the result showing the relationship between the dependent variable (stock price per share) and independent variables that are financial and macroeconomic indicators. The CAPM analysis shows ALIC to be underpriced. The correlation results shows that MPS have positive or negative relationship with many of the variables selected as well as relationship amongst the variables. MPS have negative relationship with ROE, EPS, inflation, interest rate and GDP while it shows statistically significant positive relationship with dividend per share. Furthermore, the regression model explains that the adjusted R-squared value is significant which cumulatively explained major portion of variation arising due to predictors. It also shows the fitness of applying the model for analysis with the F-significance value which is significantly. This means that the model represents to be fairly fitted model. The results of analysis answer the research questions and effectively achieve the main objective of the study. This study has many implications for investors, policy makers, financial analysts and researchers for further research in the similar field to identify the investment opportunities, to maintain a stable economy and to refine their models and provide more accurate stock price predictions.

*Keywords: Market price per share, EPS, DPS, PE, inflation, interest rate, GDP*



## CHAPTER - I

### INTRODUCTION

#### **1. 1. Background of the study**

Bradley (1998) described stock as a share or a small part of a whole company. Pope (1991) mentioned that stockholders get the ability to participate in profit and vote in the company's annual general meeting. In the words of Mladjenovic (2006), such forms of equity ownership in a company will often lead to greater returns based on the tenure of holding the investments over the long run. However, Tang (2021) showed the risk associated in cases of winding up, in such case, the investors won't have rights to the recovered assets similar to those of other payables, such as preference holders, debenture, and others. (Bell, 2024). As required by reporting frameworks, equity stock is always featured in the equity and liability sections of a company's statement of financial position, which highlights the risk and benefits it carries compared to preference shares or other forms of company debts. (Dietzler, 1968).

Insurance companies play a crucial role in contributing to Nepal's financial system as they provide services that help manage risks for individuals and businesses. (Kharel, 2019). Dahal and Pradhan (2021) elaborated that the changes in their stock prices reflect not only their own performance but also indicate broader economic trends and the confidence of investors in Nepal. This shows how inter-connected the insurance sector is with different market influences. To properly assess the state of the insurance industry and make informed decisions, stakeholders such as investors and industry participants, firstly, need to understand the details of stock price behavior before other. (Pandit, 2021). A report published by NEPSE (2079/80) revealed that the insurance industry contributed major chunk of total market capitalization and are crucial to Nepal's financial system as they provide services that help manage risks for individuals and businesses. Panthi and Chalise (2021) mentioned in a study that stock prices reflect not only their own performance but also indicate broader economic trends and the confidence of investors in Nepal.

Dagar (2014) explained that the nature of economy is inherently more competitive and complicated at present and it contributes greatly to an economy. In such scenarios, stock markets (or, capital market) have become a normal trend and is globally in existence regardless of the size of the nation's economy. Capital market has a major role to allocate the economy's capital stock among various firms and industries involving in trading, investment and other fields of operations. (Bhattarai, 2005). It helps to mobilizes unproductive savings into productive investment and so, fulfils a crucial function in the achievement of a

sustainable economy. (Bajracharya & Bhattarai, 2005). So, realizing these provides a crucial step towards understanding stock price behavior which is a product of interaction of various such factors in the economy.

One of the most important factors influencing a company's stock price are financial indicators and macroeconomic factors. Damodaran (2011) explained the importance of these factors by urging all investors to understand how the financial and technical analysis works, or at least should consult the finance experts and professionals before actively deciding to risk their investments in the stock. Eitan (2022) explained how investors rationalize their investment decisions based on financial fundamentals and macro-economic factors as these can impact the stock price behavior which is evident from the findings of a similar published studies. Deshar (2021) further elaborated how the financial indicators showed significant relation with the stock price fluctuations and contributed to the financial market and to the economy as a whole. Whereas, Shrestha (2019) highlighted the importance of the impact the macroeconomic factors have on the stock price behavior by examining the relation between these variables which concluded a significant relation. Gautam and Bista (2019) studied the impact of various variables on the stock price behavior. The conclusion that was drawn favored heavily towards the financial indicators such as return on assets, dividend, earning per share, firm size and whereas inflation had negative impact on stock price behavior. Whereas, in a similar study, Shrestha and Subedi (2015) showed how inflation had positive relation with the stock. Similarly, Fama (1981) mentioned how inflation is negatively influencing stock returns. This showed that the investors had to adjust their portfolios to manage the resulting decline in share prices.

The findings of empirical studies verify that the inflation and growth as other major factors influencing stock price behavior which was confirmed with analysis that proved a strong positive relationship of stock market with inflation of the country and its growth. Amira (2022). Shrestha and Subedi (2015), in their paper, explained that market price changes are not devoid of impacts from factors not within the control of the market, companies and the investors. Eitan (2022) concluded that macroeconomic variables have significant influences on the stock price behavior and interaction between these variables are crucial to understand the stock market. Bell (2024) explained how investors can protect themselves as much as possible, against high market negative changes in market, only by assuming long position on stocks with sound fundamentals. Graham (2024) pointed out the tendency of investors to hastily react to highs and lows of market fluctuations and that they do not properly observe

the market prices when already invested in it. So, examining what causes these fluctuations provides a critical view into the performance of individual firms.

Understanding stock price movements is of utmost importance to the investors, and this can be achieved through either fundamental or technical analysis. Technical analysis involves the study of price and volume data to forecast and understand the trajectory of stock prices. Analysts focusing on technical analysis rely on such volume and price to measure demand and supply influencing stock movements. (Edwards, 2019). Technical analysis shows more complexity due to involvement of multiple tools and techniques which makes it difficult to understand and apply. If the fundamental and technical analysis results show positive results we should consider a stock for purchase. (Kumar, Bhattarai & Balla, 2023). However, after buying a stock further analysis will be needed pertaining the hold or sell strategy should be constantly monitored. (Bell, 2024). Besides the complex nature, technical analysis is the most widely and accepted trading strategy in the stock market. Investors and traders take risk for the attached rewards. But, some economists however, have rejected the claims of technical analysts because of the appealing logic of the efficient market hypothesis. The efficient markets hypothesis emphasizes incompetence of prediction of future prices based on past data of prices and other historic information readily available. If the hypothesis is true, technical analysis should not enable a trader to earn profits without accepting unusual risk. (Bonga, 2015).

Therefore, in reference to above, this study has been conducted to investigate whether these factors influence the stock price behavior of listed insurance companies in Nepal and whether it confirms with conclusions drawn by the existing studies.

## **1. 2. Problem statement**

Price fluctuates and is influenced by a variety of variables such as economic changes, political changes, industry changes, and environmental changes. Demand and supply are two primary factors that influence stock price movements. (Graham, 2024). However, determining the precise elements influencing stock price is not always predictable. Various variables influence the share price. The paper published by Panthi (2021) highlighted and identified the problems in the capital market in Nepal. The survey identified the influences of various financial policies on the investment decisions of the market participants and concluded that the demand and supply factors of the financial instruments in the stock market are the main determinants for pricing of the stock. Chalise (2021) concluded that even though

the respondents saw secondary market as extremely risky, which contributed a lot towards the investors from distancing themselves from the stock investment, it further highlighted lack of knowledge about the market and analytical skills to be the next problems faced by normal investors in the market. (Chalise, 2021) mentioned that false information as another main problem to deter the investors from the market. The investors seemed to lack basic understanding and sufficient appropriate information.

A recent study by Bakhri and Yusuf (2023) analyzed the impacts of financial indicators and economic growth on the stock price which showed significant impact of financial indicator but no meaningful impact of the growth on the stock price. In a similar context, Niroula (2021) highlighted the influences that the such independent variables had on the stock price behavior in the context of banks. This concluded how the stock price had been influenced insignificantly by some internal factors whereas there had been signs of significant influence of other financial indicators. Arumsari and Siddi (2020) elaborated the existing problems in the stock price determination and attributed such caused to the complexities existing the internal factors affecting the company.

A study performed by Schmidt (2019) investigated impacts of false information in the stock market and the investors are currently in risk of investing purely based on rumors in the market. Few investors of the market have taken control over the movements of prices by establishing themselves while the others prefer to keep their money at bank as a safer but low return form of investment. The paper published by Chalise (2021) further explained and concluded that uncertainty and instability are main culprits that servers as discouragement to the investors.

Research conducted by Pesik (2022) to determine whether profitability and earnings have a substantial impact on the stock's market price to ascertain whether the company's profitability influences the stock price and to understand the relation between income and profitability with the investor preferences. Pesik and Prochazkova (2022) came to the conclude that financial variables like net profit and retained earnings had a significant impact. In a similar study, analysis had been done to see if dividend distribution had a major impact on market price. The analysis conducted by Maskey (2022) indicated a noteworthy inverse relation between MPS and dividend yield. Whereas, Niroula (2021) contradicted that notion by concluding the market price per share is unaffected by the company's dividend payment and that the stock price movement to be influenced by both intrinsic and extrinsic causes.

So, in light of above, these studies have shown that the financial factors and macroeconomic have significant impact on the stock price. However, the existing studies do not provide

comprehensive view focusing specifically on the insurance sector in Nepal and also the fact that these do not provide relevant conclusions regarding impacts on stock price behavior of listed insurance companies due to both financial indicators as well as undiversifiable systematic risks (or macro-economic variables). As such, the purpose of this study is to investigate following research problem questions:

- i. What is the position of market price behavior of listed insurance companies in Nepal?
- ii. Is there any relationship amongst EPS, DPS, BVPS, P/E ratio, inflation rate, GDP rate and MPS of listed sample insurance companies in Nepal?
- iii. What is the impact of EPS, DPS, BVPS, P/E ratio, inflation rate, GDP rate on MPS?

### **1. 3. Objectives of the study**

The study has following main objectives:

- i. To assess the position of EPS, DPS, BVPS, P/E ratio, inflation rate, GDP rate and MPS of sample insurance companies of Nepal.
- ii. To analyze the relationship amongst EPS, DPS, BVPS, P/E ratio, inflation rate, GDP rate and MPS of sample insurance companies of Nepal.
- iii. To examine the impact of EPS, DPS, BVPS, and P/E ratio, inflation rate and GDP rate on MPS.

### **1. 4. Rational of the study**

Maskey (2021) highlighted the fact that many similar studies had been conducted with main focus being the banking industries but analysis of stock price behavior on insurance companies is not commonly done. The study that subsequently followed on that notion by Khadka (2021) investigated the contributions of factors affecting share price, which in turn, helped understand investment pattern and provided insights for economic analysis. Nazam (2023) analyzed how indicators of stock price described the situation of the company which affected all the aspects of price determination and company performance. Lodhi (2014) conducted a study to uncover the factors impacting investor's investment decisions which showed stock price behavior as major influencing factor and highlighted the importance of stock price behaviors. Nazam (2023) also concluded that such studies to be of relevance to investors while choosing the most efficient investment and justifying their decision to invest in the stocks.

Thus, this study conducts statistical analysis of various variables with stock prices of listed insurance companies in Nepal and adds value to existing studies in similar area of studies whereas, different investors, subsequent researchers, corporations and decision makes can greatly benefit from it by exploring the practical implications of the study.

### **1. 5. Limitations of the study**

The limitations of the study are as follows:

1. This study mainly covers the secondary data to be derived from the reports of sample companies' websites, periodicals, booklets, newspapers, magazines, text books, security exchange commission, journals and directives of Nepal Insurance Authority, etc.
2. This study covers two types of variables, independent: financial indicators (such as Earning per Share (Eps), Dividend payout (Dps), Price / Earnings, book value per share) and dependent variables (such as inflation rate and GDP rate).
3. This study only covers sample listed life and non-life insurance companies whereas if more were to be considered, the findings could significantly deviate from ours. As such, the result from this study cannot not be generalized to the whole industry.
4. The study is designed to cover only a period of latest ten fiscal years from 2070/71 to 2079/80.

## **CHAPTER II**

### **LITERATURE REVIEW**

This chapter presents a comprehensive review of various previously published literature from various sources which aims to provide an understanding of the different concepts and theories relevant to the subject matter of the current study. The chapter is divided into four sections: the first section covers the conceptual review, the next covers theoretical review, the third part covers empirical review, while the final part explains the research gap.

It can be listed as follows:

- Conceptual review
- Theoretical review
- Empirical review
- Research gap

#### **2.1. Conceptual review**

The conceptual review helps to look into various theories and concepts regarding the existing studies, relation between various factors and act as a basis for new studies to develop hypothesis. In this part, review of various theories and concepts based on past and current studies of the stock price behavior concepts are identified and presented from various books, journals, and sites.

##### General concept of stock

The purpose of investing in stock is to ensure savings and safer alternative, which ensures saving money to be utilized in times of need. The common stocks are historically more volatile than any other forms of investments. (Teweles, 1998). However, they also provide higher rate of returns than most forms of investments. Even if stocks are overvalued at the time of investment, over time, they start providing returns. The two main reasons that were mentioned were technology, which impact corporate performance impacting profit, and globalization. (Bradley, 1998).

The investors of common stock are not guaranteed dividends as such are declared only at discretion of the directors. The directors declare it only if there are no better alternative use or wealth maximization opportunities (Mahdzan, 2017). Due to higher volatility of stocks, investors might not want to be fully invested in stocks. The stock price is highly influenced by such decisions as is evident from the reviewed published study which shows dividend and

stock price volatility have negative relationship. In a similar study, it was found that stock price and dividend show positive and significant relationship. (Maskey, 2022).

### Financial Market

A financial market is a market place in which financial instruments including various assets and derivatives, are actively exchanged. Exchange of financial instruments are the main purpose for which it provides a means or a way through which that can be achieved as well as a means to allocate the resources effectively in an economy so basically providing a buyer and a seller a place to interact and determine market / exchange facilities. (Ehrhardt, 2024). The market can basically be divided into two types: money markets and capital markets. Money markets exchange liquid short-term instruments, whilst capital markets facilitate long-term financing. (Brigham, 2024).

### Security Market

The governing authority controls, develops new regulations, improves and monitors member institutions, interprets provisions, and acts in the best interests of Nepal's investors. It can be classified as either of the two namely primary or secondary. The fundamental difference is whether the securities are issued for the first time or resold. Security markets exist to simplify transactions between market players, such as buyers and sellers. (Kevin, 2022).

The recent allotment and issuance of the shares in the primary market is called as an initial public offering (ipo). (Alexander, Sharpe & Bailey, 2002). Secondary markets are where existing securities issued in the primary market are traded between investors. (Erhardt, 2024). In a secondary market, securities which already historically allotted are traded or invested. Secondary markets make it easy for investors to quickly raise capital for constructive reasons. (Cheney, 1992)

The issuer receives cash, which it invests in the firm or for other financial goals. Companies that issue new securities for the first time do so through the primary market. The issuer of such securities could be an existing or new company seeking to generate extra cash by requesting the general public to subscribe to the securities being offered. Raising capital is the main way the companies can ensure funds for the operations. It is less risker source then taking other sources of funds. As such, primary markets enable them to raise the needed fund. (Gitman, 2001)

## **Financial indicators**

### **Earnings per share (EPS)**

Accounting earnings that represent the difference between revenue and expenses, even those related to long term source of finance like term debts, are known as total earnings available to equity shareholders. Dividing the earnings or profits earned as numerator and the total number of shares available as the denominator gives the value for earnings per share. (Alexander & Bailey, 2002)

Many studies have concluded the importance of EPS in influencing stock prices. Research done by Ball and Brown (1968) concludes that EPS have a significant impact on stock prices, as they provide critical information about a company performance. Additionally, studies by Beaver (1968) and Kothari (2001) have shown that changes in EPS are closely monitored by investors and can lead to substantial stock price movements.

The investors perceive the company to be more profitable and capable of generating higher returns which in turn fluctuates stock prices in the market. On the contrary, when required return exceeds expected EPS, this can result in a lower stock price, as it indicates unsound financial situation of the company as the study by Easton and Harris (1991) concludes, unexpected changes in EPS are strongly correlated with stock price reactions.

For listed insurance companies in Nepal, maintaining a strong and consistent EPS can enhance investor confidence and attract more investment. A higher EPS indicates robust profitability, which can be particularly appealing to risk taker investors for attractive returns.

### **Book Value Per Share (BVPS)**

Revenue is generated by a corporation and distributed as dividends to shareholders and interest to creditors. The total retained earnings shown in the company's accounts is increased by the remaining income. The cumulative retained earnings are added to other elements like common stock and capital given over par value to determine the book value of the equity. Division between the total of equity as numerator and the total number of shares available as the denominator gives the value for book value per share. (Bailey, Sharp, & Alexander, 2002). An entity's tangible assets are reflected in its book value. A company with exceptional management and performance should frequently be worth more on the market than its physical assets have ever been worth.

According to existing studies, a substantial correlation can be found between BVPS and stock prices. Ramij and Das (2021) found that BVPS has a considerable and beneficial impact on stock prices. Based to such research, investors frequently utilize BVPS as a benchmark to determine the fair value of a stock, which influences their investment decisions.

#### Market value per share

The market value per share represents what the price is being offered for the stock in the market between the market participants. For stocks that are not so frequently traded in regular markets, obtaining accurate prices can be challenging. Even when prices are available, they may only reflect transactions involving a small number of shares, which may not accurately represent the overall market value of the company. Therefore, caution is needed when interpreting market price information for such companies. (Horne & Wachowicz, 2001)

#### Retained Earnings

“The balance account indicates the total amount of earnings the firm has not distributed as dividend throughout its operational history; these earnings will be invested back in the firm as retained earnings”. (Alexander, Sharpe & Bailey, 2002)

### **Macro-economic variables**

#### Inflation

There are many studies that have been conducted to determine the impact of inflation on stock prices. For instance, Gautam and Bista (2019) analyzed the impact of various variables on the stock price behavior. The study concluded that return on assets, dividend, earning per share, firm size and inflation are negatively impacting on market price of share. Whereas, in a similar study, Shrestha and Subedi (2015) showed how inflation is positive relation with the stock market of the country and overall growth. Similarly, in international context, Fama (1981) found that inflation is negatively influencing stock returns. Summers' portfolio hypothesis (1981) suggests higher expected return can be seen on the alternative assets like real physical assets due to higher inflation. Consequently, investors adjust their portfolios by reducing equity holdings and reallocating funds to other assets, resulting in a decline in share prices. Fama's Proxy Hypothesis (1970) posits that relationship exists between returns on stock with the inflation rates which is a negative relation. This can be used as a proxy for the purpose of defining the relationship between returns and other variables which show positive

relation and are of vital interest to valuing the equity shares. These act as primary fundamental determinants for equity values.

## GDP

Bhattarai (2018) examined the impact of several variables on stock price behavior and discovered that GDP growth has a favorable impact on the market price of shares. A comparable study by Deshar (2021) found a positive association between GDP growth and stock market performance, implying that economic expansion enhances investor confidence and stock prices. Al-Eitan and Amira (2022). Similarly, the economic growth theory proposes that as GDP grows, the overall economic environment improves, resulting in more profits and goodwill. As a result, investors are more likely to invest in shares, driving up stock prices. Several empirical research support the statement hypothesis. GDP growth can have a significant impact on the stock prices of Nepal's listed insurance companies.

## 2.2 Theoretical Review

Some relevant financial theories:

### Theories of Share Price Behavior

The conventional approach has assumed that the market is inefficient, which comprises technical and fundamental study of theory. Fama (1965) stated that the market is efficient, and hence there are various types of efficient market hypothesis. There used to be a division amongst the investors before the development of efficient market theory and they were of two separate opinions, either fundamental or the technicians. (Brown, 2011). Three types of efficient market theories exist, based on the incorporation of various types of information and accuracy in price stock: weakly efficient market or random walk, semi strongly efficient, and strongly efficient market theory. (Reilly & Brown, 2011), resulting in increased stock prices for these companies.

### Technical Analysis Theory

In general, technical analysis means review, analysis of data in forms of charts, reports and study these data to predict or develop patterns, which helps to predict future prices. (Edwards, 2019). As explained by Francis, some of these charts are used to predict movements of market index and others to predict the functions of both individual assets and the market as a whole. A journal was published on Dow theory around 1900 which acted as a backbone for understanding technical analysis. Bailey (2002) further elaborated that it involves study of the

historical volume as well as price information of the stock to possibly predict future prices, and deduce a hypothesis from the analysis about the future price movement of shares seeking to interpret past pattern, on the assumption that history tends to repeat itself. Technical analysis discerns past pattern or trend, which they believe to repeat in the future and recommend for the timely holding and disposing mechanism which is profitable or recommend for short-term speculation based on which, forecast of profitable patterns is enabled (Bailey, 2002). The technical analysts usually attempt to predict short-term price movements and thus makes recommendations concerning the timely purchase and sales of either specific stocks or groups of stocks. (Alexander, Sharpe & Bailey, 2002).

Main assumptions of the technical theories thus, can be summarized as follows:

- a. Demands and supplies based on rational and irrational factors which reflects on the price.
- b. Collection of price shows existing and future trends that persist for substantial length of time.
- c. The changes in trend caused by past price and volume data.
- d. The patterns tend to repeat itself.

#### Fundamental Analysis Theory

Hassan (2015) argued that fundamental analysis model to be more credible than others when it comes to predicting. Sandler (2012) mentions that present value of the security's future cash flows discounted at a suitable risk-adjusted discount rate is its intrinsic value. The present value of all future income that the share owner will get is what determines the value of common stock. The intrinsic worth needs to be reflected in the real price. If capitalization rates and cash flows match up over the long term, that is a good predictor. Zoran (2013) explained fundamentalists try to determine the best estimate of the intrinsic value of a share by examining the company's sales, profit, dividends, management caliber, and a host of other economic and industrial factors that affect the company's future income and business opportunities. In reality, though, it is unlikely or rather, not really possible to predict in advance, what the stocks' will be providing as income in the future. Francis (1997).

#### Efficient Market Theory

Francis (1997) explained this theory within a variety of contexts, such as organizational, investment, allocation, and informational efficiency, among others. Frequently, the term "efficiency" in relation to the securities market are misused to refer to a number of

conceptually different concepts. Specifically, it could refer to (a) information efficiency (b) production efficiency or, (c) exchange efficiency. Nevertheless, the exclusive focus of this study is on the efficient market theory's information efficiency aspect in stock pricing. The stock price is continuously updated instantly and reflects all available information, so such cannot provide any competitive advantage to a trader. In a well-functioning market, every new piece of information has an impact on security prices. According to the efficient market theory, the capital market can operate efficiently under certain conditions. Ignoring the critics of this hypothesis, we can see that it holds true in most cases. For example, if we consider a market where (i) there is no transactions cost (ii) all information is available to all market participants and (iii) all agree in the implications of current information for the current prices and distribution of future prices of each security. In such a market the current price of a security obviously “fully reflects” all available information. (Francis, 1997).

According to Charron (2017), the efficient market hypothesis states that the investors cannot outperform the market over a long period of time when risk is taken into account. The underlying assumptions of this theory are that security prices are a reflection of all the information that is currently known about a corporation but they fluctuate if new information is available. Shostak (1997) concluded that market efficiency suggests that new information is promptly analyzed by the market and any necessary price adjustments are made immediately.

The requirements for a securities market to be efficient are:

1. One trader alone cannot set/ affect the prices of securities as the information is freely available to all the market participants approximately at the same time.
2. Information is generated randomly and such are basically independent of one another.
3. “Investors react quickly to react the new information causing stock prices to adjust accordingly.” (Adams, 1998).

### The Random Walk Theory

The past prices cannot predict future course of price fluctuations which can be used to earn above average return. The movements of future prices are independent from past prices so the series of price changes are a random phenomenon. The random walk theory only elaborates that successive price changes are independent. (Fischer, 1999).

Investors may benefit easily if price movements could be utilized to forecast changes in future prices. But quick earnings don't last in cutthroat markets. Prices fluctuate rapidly as investors attempt to profit from the information in previous prices, so that today's stock price reflects the higher earnings from examining previous values. Prices won't follow patterns anymore, and variations in one period won't affect variations in the next. Stated otherwise, the price of the shares will resemble a random walk. (Myers & Brealey, 2000)

In a study conducted by Sinha (2024), looked in to the applicability of the theory. It discovered that, within an efficient market, stock prices exhibit randomness due to their inherent unpredictability and the influence of financial demands. Such are due to responses to market movements, driven by financial needs and individual decisions. According to the Random Walk Theory, entrusting fund managers to navigate the unpredictable nature of stock prices may not guarantee sustained success, as it is unpredictable and achieving Jensen's alpha returns in coming years are plagued by uncertainties. Passive investors, who follow the principles of the Random Walk Theory, tend to favor passive investments over actively managed funds. This preference arises from the observation that fund managers often fail to surpass the market index, leading to a desire to avoid high fees associated with active management. (Sinha, 2024).

#### Capital Assets Pricing Model (CAPM)

CAPM, initially introduced by Sharpe (1964) and was later further developed by joint efforts of various scholars. Treynor (1961, 1962) showed how it provided valuable insight to the study by further helping to understand how the interactions of various systematic risk factors influence the stock price behavior. Calculating beta and including CAPM in the study helps better understand stock's sensitivity to market movements, which is a crucial financial indicator. Other researchers such as Lintner (1965), Mossin (1966) contributed further which led to development and practical implications of the model. The CAPM model, basically extends capital market theory in a way that allows investors to evaluate the risk-return trade-off for both diversified portfolios and individuals. To do this, the CAPM redefines the relevant risk metric from total volatility to just the non-diversifiable fraction of that total volatility (i.e., variance). (Shastri, 2005). It quantifies expected return by using relation formula that incorporated  $R_f$ , market premium and beta. It also laid the foundation for development of APT. It was a relatively new measure, when it was first introduced, and also emphasized the need to incorporate beta coefficient, and also used in calculating the portfolio

risk when compared to the market portfolio. (Reilly & Brown, 2011). Ruhani (2018), in their analysis, found that the CAPM was the first to mention the concept of beta, by taking into account the measure of the covariance between the assets and the returns of market, represented the importance of systematic risk and the risk of a diversified portfolio.

Therefore, unlike Markowitz (1952), the CAPM explicitly, also mentions the concept of systematic risk and its role. However, there are other models more robust than the CAPM which were subsequently developed in the recent times and have gained more popularity, such as APT, as explained, offers an alternative approach to the CAPM does not, in addition to beta, include other factors as APT does like, inflation, gdp, and various other factors to determine return. (Copeland, Weston & Shastri, 2005).

CAPM is based on the following assumptions:

- a. All investors are rational and risk-averse and can borrow and lend an unlimited amount at a given risk-free rate of interest as there are no restriction on short sales of any assets.
- b. There are no taxes, no transaction costs.
- c. All investors are price takers; i.e. all investors assume that their own buying and selling activity will not affect stock price.
- d. All investors have identical estimates, estimates of the expected returns, variances and covariance among all assets; i.e. investors have homogenous expectations.

#### Modern Portfolio Theory (MPT)/Mean-Variance Analysis

It was firstly published in a paper by Markowitz who demonstrated the way to diversify an investment in order to obtain optimal portfolio and to diversify associated risk. which layed the foundation for MPT. Thereafter, subsequent researches, books and papers have been published highlighting the relevance and criticisms of the theory. A related study published recently by Berk, Bekir and Tutarli (2020) explores to the possibility to generate efficient portfolios based on selected criteria which validated the assumptions of the theory. This study, is one of the many studies that are concluded in favor of this theory.

Markowitz (1952) spread the notion that, in order to minimize portfolio related risk, one need to invest in different stock from different sector. Doing this will basically mitigate any risk associated with it and maximize the returns for the investors. This theory urges the need to diversify assets based on correlation analysis. For example, this means that, investing in two

stocks with perfect negative value of 'r' will always keep us safe for large market fluctuations. He rejected the idea that investors should base their portfolios solely on the high return. Doing so will be extremely risky and may lead to assets with similar returns being assigned to the investment portfolio without any consideration for risk it poses to the overall portfolio. In a related article, Saito, Savoia, and Fama (2013) further elaborated that a portfolio giving the maximum return is not always necessarily one with the least risk, and emphasized the notion to always prefer to diversify one's portfolio, so that it would take into account for the relationship between assets and not only consider gains which will help in risk management or reducing it.

Kim (2013) explained in their literature explained why it is often known as the theory of portfolios and that it focuses on need to diversification. Wong (2013) researched and concluded the banking sector and MFIs sectors were amongst the first ones to make use of it. Most MFIs utilize the theory to manage individual risk and portfolio risk exposure arising from changes in market conditions and performance.

Thus, the investors can basically, (i) assess the expected risk and (ii) calculate return on holdings by using this approach.

#### Arbitrage Pricing Theory

According to Ross (1976), this theory is more robust than the CAPM which has been developed and has gained relevance, which offers an alternative to the CAPM, in addition to beta, it correlates a number of factors with asset return like inflation, GDP, etc. (Copeland, Weston & Shastri, 2005). The factor loading model and the macro variable model are two variations of the Arbitrage Pricing Theory (APT). Factor loading models use artificial variables generated through factor analysis, while the macro variable model, as noted by Erdugan (2012), incorporates macroeconomic variables that have a clear economic impact on stock prices. Wahyuni (2020) made a comparative analysis between the two models to analyze stock return of manufacturing companies in Indonesian stock market which noted CAPM to be more precise or accurate than the APT model in predicting stock returns in the period of 2015-2018. However, APT was further elaborated by Roll and Ross (1995), who managed to conclude its advantages for portfolio management. APT serves as an alternative to the Capital Asset Pricing Model (CAPM), which is the main tool for analyzing capital market phenomena. APT predicts a relationship between portfolio returns and individual

asset returns using a linear combination of variables. Unlike CAPM, APT fully embraces the concept of arbitrage, which is a fundamental principle in finance theory, as emphasized by Ross (1976). Even though APT performed exceptionally well in comparison to CAPM, neither showed a clear advantage in terms of explanations within and out of sample.

### **2.3. Empirical Review**

International context

Ibrahim and Ahmad (2015) studied the effects of cash flow on Share Price of the listed financial institutions to analyse the impact of independent variables like cash flows from operational, investment and financing processes individually and collectively on the stock price behavior. It discovered no significant relationship between operating and investing activities in the price of share.

Zainudin and Mahdzan (2017) performed an analysis aimed at analyzing dividend policy and stock price volatility of industrial products firm in Malaysia using descriptive statistics and regression analysis. Various variables like growth in assets, leverage, firm size, were analyzed to determine their impact on the stock price. It was discovered that there was a significant and negative relationship between stock price volatility and the DPR of company and significant and negative relationship between stock price volatility and dividend yield.

The study was carried out by Kail and Rahman (2018) to determine the impact of financial indicators towards stock returns of listed finance companies. Data analysis was performed using Pearson correlation method to calculate statistical impact various independent variables such as earnings per share, return on equity, dividends per share on the stock returns. In this study, it was concluded that publicly listed finance companies showed significant relationships between financial indicators and stock returns, approximately half of the finance companies displayed strong correlations (above 0.5) between these indicators and stock returns.

Sudirman and Antoni (2021) conducted an analysis to determine the factors affecting returns. Data analysis was performed using various statistical analysis methods like multiple linear regression, multi-co linearity test, T test (Partial Test), F Test (Simultaneous Test), coefficient of determination and Pearson correlation method to calculate statistical significance of claim payment, premium income, capital structure on the returns of listed insurance companies in

Indonesia. In this study, it was concluded that the capital structure has a positive and significant effect on firm value, whereas, claim Payment has no significant effect on growth, so null hypothesis is accepted.

Ramij and Das (2021) did a study to determine microeconomic factors affecting stock price of insurance companies. Data analysis was performed using various statistical analysis methods like descriptive statistics, correlation matrix, regression to calculate statistical significance of EPS, PE ratio, size of firm, return on Assets and book value per share on the share price of listed insurance companies in Bangladesh. In this study, it was concluded that ROA, BVPS, EPS, and PE have significantly and positively affected the share's market stock price.

Pesik and Prochazkova (2022) performed an analysis to determine the effects of financial indicators on share price. The study used statistical analysis methods like Panel Regression Model and cluster model to determine the effects of selected variables like book value per share and the profit on the share price of the sample companies. It was concluded that financial indicators do affect the valuation of the company and the investor sentiment changes quickly as the world faces unprecedented challenges and this needs to be kept in mind by a potential investor.

Al-Eitan and Amira (2022) published a study to determine the factors affecting stock price of commercial banks in the market by using descriptive statistics, Linear correlation, regression to analyze variables like EPS, DPS, PE, BV, ROA, GDP, inflation (INF) on the stock price. In this study, it was concluded that earnings per share emerged as a major predictor of stock prices, with a positive impact at the 1% significance level. Additionally, macroeconomic factors like GDP and money supply significantly influence stock prices.

Similarly, in South Africa, another study was performed by Msomi and Nzam (2023) to analyze firm-specific factors affecting the financial performance of insurance companies. The study used Pearson's correlation statistical analysis methods to determine the impact of variables like company size, leverage, tangibility, premium rate, liquidity ratio on the financial performance of the sample insurance companies. In this study, it was concluded that correlation is in the positive direction between the tangibility of an asset and the financial performance of sampled insurance companies.

Inim and Frank (2023) studied an analysis to determine the impact of fundamental factors on stock price volatility of listed firms. Data analysis was performed using descriptive statistics, correlation matrix, Regression analysis methods to calculate statistical significance of various independent variables such as ROA, ROE, net interest income (NII), EPS, DPS on the stock returns. In this study, it was concluded the coefficients of DPS, EPS, NII and ROE contribute positively to share price of the sampled banks while ROA impact share price negatively.

Bakhri and Yusuf (2023) did an analysis to determine the most influential factors on stock prices. Data analysis was performed using descriptive statistics, correlation matrix, F test, coefficient of determination methods to calculate statistical significance of various independent variables such as EPS, ROE, GDP on the stock prices. In this study, it was concluded that EPS has highly positive impact on stock prices, while ROE has a significant negative effect. GDP was found to have no meaningful influence on stock value based on the sample stocks listed on index.

Similarly, a Serbian researcher, Ordic and Stefanc (2023) did a study to analyze the profitability determinants of life insurance companies. Data analysis was performed using descriptive analysis, Pearson's correlation coefficients, Hausman test results to determine statistical significance of various independent variables such as return on assets, operating margin, expense ratio, Investment ratio, premium of company, company size, financial leverage on the profitability. In this study, it was concluded that the growth of debt-to-equity ratio has a negative statistically significant impact on ROA, while the growth of liquidity ratio has a positive impact on ROA.

Similarly, in the study by Sharma and Mahendru (2010), it was observed that inflation had no significant impact on stock price behavior as so null hypothesis was rejected. Ali (2014) found a negative correlation on stock market by the interest rate as macroeconomic variable while the calculated p value showed there existed a statistically significant relationship between the interest rate and the stock price after conducting a regression analysis.

### **National context**

Lamichhane and Dhungel (2024) performed an analysis to determine the impact of firm's fundamentals on return of stocks. Data analysis was performed using descriptive statistics, correlation and regression analysis, correlation coefficient to calculate statistical significance

of various independent variables such as earnings per share, book-market equity, and earning yields, on the stock returns. In this study, it was concluded that stock returns are positively affected by firms' earnings per share, book-market equity and earning yields, which implies that firms should focus on increasing earnings per share, book-to-market equity and earning yields in order to maximize the stock returns.

Karki and Balla (2023) conducted an analysis to determine performance evaluation of technical analysis for investment strategies in the market. Data analysis was performed using t-statistics, bootstrap method to determine statistical significance of various independent variables such as annualized return, profit factor, average holding period, Beta on the stock returns. In this study, it was concluded that stock returns are positively affected by firms' earnings per share, book-market equity and earning yields, which implies that firms should focus on increasing earnings per share, book-to-market equity and earning yields in order to maximize the stock returns.

Bashyal and Bhandari (2023) conducted an analysis to determine the impact effect of capital structure on financial Performance of insurance companies in Nepal. Data analysis was performed using correlation and regression analysis to calculate statistical significance of various independent variables such as Total debt ratio (TDR), Liquidity ratio, Assets tangibility, Firm size, Equity to total assets on the financial performance of insurance companies in Nepal. In this study, it was concluded that the beta coefficients are negative and statically insignificant for total debt ratio, liquidity ratio and assets tangibility with return on assets. Whereas, the beta coefficients are positive and statically insignificant for equity to total assets ratio with return on assets.

Upadhyaya and Niraula (2022) studied and performed an analysis to determine the internal control system in enhancing the corporate governance in listed insurance companies in Nepal. Data analysis was performed using correlation and regression analysis to calculate statistical significance of various independent variables such as risk assessment control environment, internal audit, monitoring and supervision on good governance of listed insurance companies in Nepal. In this study, it was concluded that the risk assessment activities in insurance companies positively enhance transparency and responsibility but independent directors are adversely affected. This study shows significance of management responsibilities and investors' expectations based on entity's performance.

Khadka (2021) did a study on share price behavior of Nepalese insurance companies. Data analysis was performed using descriptive statistics, correlation matrix and regression analysis to calculate statistical significance of various independent variables such as DPR, EPS, P/E, DPS on share price behavior of insurance companies in Nepal. In this study, it was concluded that there is a statistically significant relation between the independent variables and MPS.

Deshar (2021) conducted a study on relationship between fundamental indicators and stock Price of Nepalese Banks and Insurance Firms. Data analysis was performed using descriptive statistics, correlation matrix, regression, ANOVA to calculate statistical significance of various independent variables such as ROE, ROA, EPS, DPS, P/E ratio, size, money supply, GDP growth rate, exchange rate, and inflation rate on share price behavior of insurance companies in Nepal. In this study, it was concluded that there is positive relationship between P/E ratio, ROE, and BVPS utilizing descriptive statistics, correlation and regression analysis whereas dividend yield (DY) showed a negative relationship with the price of stocks.

Jaishi and Poudel (2021) conducted a study on impact of firm specific factors on financial performance of life and non-life insurance companies in Nepal. Data analysis was performed using descriptive analysis, Pearson's correlation coefficients to calculate statistical significance of various independent variables such as financial performance, liquidity, tangibility on financial performance of life and non-life insurance companies in Nepal. In this study, it was concluded that the insurance companies having a high debt ratio showed better financial performance.

Niroula (2021), in a study, tried to analyze the stock price behavior of commercial banks of Nepal. Data analysis was performed using descriptive and analytical analysis to calculate statistical significance of various independent variables such as EPS, PE ratio, size of bank, return on equity and book value per share with the stock price of share. In this study, it was concluded that market price of stock is influenced positively but insignificantly by dividend yield and return on assets, respectively. Whereas, the EPS, PE ratio and size of the bank has favorable effect on the market price of stock.

Wagle (2020) conducted a study on determinant of stock market prices of commercial bank in Nepal. Data analysis was performed using descriptive statistics, correlation analysis, regression analysis to determine statistical significance of various independent variables such

as market to book proportion, earning yield, price earnings ratio with the stock price of share. In this study, it was concluded that stock market price is affected by the demand and supply of shares as well as the internal and external factors.

Gautam and Bista (2019) performed a study on factors affecting share price of Nepalese non-Life Insurance Companies. Data analysis was performed using descriptive statistics, Pearson's correlation coefficients matrix, regression to determine statistical significance of various independent variables such as dividend per share, firm's size, market price, price earnings ratio, return on assets, inflation with the stock price of share. In this study, it was concluded that return on assets, dividend per share, earning per share, firm size and inflation have negative impact on price earnings ratio and market price of share of Nepalese non-life insurance companies.

Bhattarai (2018) researched on the firm specific and macroeconomic variables effects on share prices of Nepalese commercial banks and insurance companies. Data analysis was performed using descriptive statistics, Pearson's correlation, coefficient matrix, regression analysis to determine statistical significance of various independent variables such as Firm Specific Variables, macroeconomics variables (GDP, Inflation) with the stock price of share. In this study, it was concluded that ROE, ROA, EPS, DPS, P/E Ratio, size and macroeconomic: MS, GDPR, ER and IR have significant impact on the share prices of banks and insurances companies in Nepalese context.

Similarly, Shrestha and Subedi (2015) researched to find the impacts of determinants on stock market performance in Nepal. Data analysis was performed using general behavior model, correlation analysis to determine statistical significance of various independent variables such as NEPSE index, GDP, 91 days treasury bill rate, board money supply, political event and political change with the stock price of share. In this study, it was concluded that stock market has positive relationship with inflation of the country and growth. However, political changes have negative impact on the rate of interest whereas, stock market performance have significant impact on the share prices of banks and insurances companies in Nepalese context.

Table 1

*Summary of Review*

<b>S. N.</b>	<b>Author (s)</b>	<b>Variables</b>	<b>Methodology</b>	<b>Major Findings</b>
1	Ibrahim and Ahmad (2015)	Cash flows from operational, investment and financing processes individually and collectively	Regression Coefficient and statistical analysis result of cash flow.	No significant relationship between operating and investing activities in the price of share of listed commercial banks
2	Shrestha and Subedi (2015)	NEPSE Index, GDP, 91 days treasury bill rate, board money supply, political event and political change	General Behavior Model, correlation analysis	Stock market has positive relationship with inflation of the country and growth. However, political changes have negative impact on the rate of interest and stock market performance.
3	Zainudin and Mahdzan (2017)	Growth in Assets, Leverage, Firm Size.	Descriptive Statistics and Regression Analysis	Significant and negative relationship between stock price volatility and the DPR of company and significant and negative relationship between stock price volatility and Dividend yield.
4	Kail and Rahman (2018)	Earnings per share, Return on Equity, Dividends per Share, Stock Returns, finance companies	Pearson Correlation method	Publicly listed finance companies showed significant relationships between financial indicators and stock returns, approximately half of the finance companies displayed strong correlations (above 0.5) between these indicators and stock returns.
5	Bhattarai (2018)	Share Prices, Firm Specific Variables, Macroeconomics Variables (GDP, Inflation)	Descriptive statistics, Pearson's correlation coefficient matrix, Regression	ROE, ROA, EPS, DPS, P/E Ratio, size and macroeconomic: MS, GDPR, ER and IR affecting the share prices of banks and insurances companies in Nepalese context.

6	Gautam and Bista (2019)	Dividend per share, firm's size, market price, price earnings ratio, return on assets, inflation	Descriptive statistics, Pearson's Correlation Coefficients Matrix, Regression	Return on assets, dividend per share, earning per share, firm size and inflation have negative impact on market price of share and have negative impact on price earnings ratio of Nepalese non-life insurance companies
7	Wagle (2020)	Market price of stock, market to book proportion, earning yield, price earnings ratio	Descriptive Statistics correlation analysis, regression analysis	Stock market price is affected by the demand and supply of shares and the internal and external factors also affect the share price.
8	Arumshari and Siddi (2020)	Profitability, Leverage, Company Size, Share Price.	Multiple Linear Regression Analysis Test	If all the independent variables have a value of 0, then the stock price is 5299.663. the profitability regression coefficient is negative at 17068, 117.
9	Sudirman and Antoni (2021)	Claim payment, Premium Income, capital structure	multiple linear regression, multi-collinearity Test, T test (Partial Test), F Test (Simultaneous Test), Coefficient of Determination Test	The capital structure has a positive and significant effect on firm value, Claim Payment (PK) has no significant effect on profit growth, so H0 is accepted.
10	Niroula (2021)	EPS, PE ratio, size of bank, return on equity and book value per share with the stock price of share.	Descriptive and analytical analysis	Market price of stock is influenced in positively but insignificant by dividend yield and return on assets. The market price of stock has the favorable effect by the EPS, PE ratio and size of the bank.
11	Jaishi and Poudel (2021)	Firm specific factors, financial performance, liquidity, tangibility	Descriptive analysis, Pearson's correlation coefficients	The insurance companies having a high debt ratio have better financial performance.

12	Deshar (2021)	ROE , Dividend yield, BVPS, PE	Descriptive statistics, Correlation Matrix, Regression, ANOVA	Positive relationship between P/E ratio, ROE, and BVPS utilizing descriptive statistics, correlation and regression analysis whereas DY has a negative relationship with the price of stocks.
13	Khadka (2021)	DPR, EPS, P/E, DPS, and MPS	Descriptive statistics, Correlation Matrix, Regression	Significant associations between the independent variables and MPS.
14	Ramij and Das (2021)	EPS, PE ratio, size of firm, return on Assets and book value per share, stock price of share.	Descriptive statistics, Correlation Matrix, Regression	ROA, BVPS, EPS, and PE have significantly and positively affected the share's market stock price.
15	Upadhyaya and Niraula (2022)	Risk Assessment Control Environment Internal Audit Monitoring and Supervision	Regression analysis, correlation	Risk assessment activities in insurance companies positively enhance transparency and responsibility but independent directors are adversely affected.
16	Pesik and Prochazkova (2022)	Book value per share and the profit	Panel Regression Model and cluster model	Financial indicators do affect the valuation of the company; Investor sentiment changes quickly as the world faces unprecedented challenges and this shall be kept in mind by the potential investor.
17	Al-Eitan and Amira (2022)	EPS, DPS, PE, BV, ROA, GDP, inflation (INF)	Descriptive statistics, correlation, regression	Earnings per share emerged as a major predictor of stock prices, with a positive impact at the 1% significance level. Additionally, macroeconomic factors like GDP and money supply significantly influence stock prices
18	Maskey (2022)	Book Value per share, retention ratio, earning per share, dividend per share, price earnings, dividend yield, company age	Regression analysis, correlation, coefficient determination, of	Positive and significant relationship exist between the market price of the share and Dividend per share, whereas, all other variables except dividend yield shows positive but insignificant relationship with the market stock.

19	Msoni and Nzam (2023)	Company size, Leverage ratio, Tangibility of assets, Premium rate, Liquidity ratio	Pearson's correlation	Correlation in the positive direction between the tangibility of an asset and the financial performance of insurers.
20	Bashyal and Bhandaari (2023)	Total debt ratio (TDR), Liquidity ratio, Assets tangibility, Firm size, Equity to total assets	correlation, Regression coefficients	The beta coefficients are negative and statically insignificant for total debt ratio, liquidity ratio and assets tangibility with return on assets. The beta coefficients are positive and statically insignificant for equity to total assets ratio with return on assets.
21	Karki and Balla (2023)	Annualized Return, Profit Factor, Average holding period, Beta	t-statistics, Bootstrap method	The performance metrics show positive results towards significant results, where the Stochastic oscillator generated the highest profits.
22	Ordic and Stefanc (2023)	Return on assets, Operating margin, Expense ratio, Investment ratio, Growth rate of written premium of company, Company size, financial leverage	Descriptive analysis, Pearson's correlation coefficients, Hausman test results	The growth of debt-to-equity ratio has a negative statistically significant impact on ROA, while the growth of liquidity ratio has a positive impact on ROA
23	INIM and FRANK (2023)	Stock price, ROA, ROE, Net Interest Income (NII), EPS, DPS	Descriptive statistics, Correlation Matrix, Regression	The model showed that the coefficient of DPS, EPS, NII and ROE contribute positively to share price of the sampled banks while ROA impact share price negatively.
24	Bakhri and Yusuf (2023)	EPS, ROE, GDP	Descriptive statistics, correlation, Coefficient of determination, F test, of	EPS has an enormous positive impact on stock prices, while ROE has a significant negative effect. GDP had no meaningful influence on stock value.

25	Lamich hane and Dhunge 1 (2024)	earnings per share, book-market equity, and earning yields, stock return	Descriptive statistics, Correlation and regression analysis-test, Adjusted r square, Durbin Watson test, correlation coefficient	Stock returns positively affect firms' earnings per share, book-market equity, and earning yields, which implies that firms should focus on increasing earnings per share, book-to-market equity, and earning yields to maximize stock returns
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## 2.4 Research gap

There has been many research conducted earlier on the topic of stock market and stock market prices. All the researches have somewhat much useful findings along with related limitations.

Zainudin and Mahdzan (2017) identified a significant and negative relationship between stock price behavior and the financial indicators of company while, a recent study by Ramij and Das (2021) concluded significant and negative relationship between stock price behavior and financial indicators which shows contradictions in the existing studies and thus, no conclusive statement can do extracted due to such contradictions. In similar way, Al-Eitan and Amira (2022) cited that there was a significant and positive relation between GDP with stock prices while another study found it to be negative. Another issue would be the selection of methodologies. The existing studies by the researchers like Mahdzan (2017), Das (2021) primarily focused on use of descriptive analysis and correlation whereas using multiple regression analysis would have yielded better predictive model for better analysis of the variables.

Thus, this study is aimed at eliminating such gaps and answering the research questions in the study, by analyzing the stock price behavior of both listed non-life and life insurance companies in Nepal based on both internal company data and macroeconomic variables.

## **CHAPTER–III**

### **RESEARCH METHODOLOGY**

This chapter has five sections. The first section is for research design, the second section covers population and sampling design, the third section covers nature and sources of data while the fourth section deals with the research framework and variables. Finally, the last section of the chapter covers methods of analysis. These have been described in detail as follows:

#### **3.1. Research design**

The study has been conducted based on descriptive and casual comparative research design in order to investigate the stock price. The research uses quantitative data to provide a comprehensive understanding of main financial indicators. This study aims to uncover valuable insights on market price behavior by analyzing ROE, EPS, market to book value per share, price-to-earnings (P/E) ratio, and dividends per share (DPS), as well as macroeconomic factors such as inflation rate and GDP growth rate. The quantitative data has been analyzed using descriptive statistics, correlation and regression analysis.

#### **3.2. Population, sample and sampling design**

The target population for this study is the listed insurance companies in NEPSE. The study is based on purposive sampling. It covers a time period of 10 years from financial years 2070/71 to 2079/80 of the sample insurance companies. As of date, there are 12 listed life and non-life insurance companies each, out of which, 6 non-life and 7 life insurance companies have not undergone merger till date. Based on such criteria, the sample companies for the study are listed as follows:

1. Asian Life Insurance Co. Limited (ALICL)
2. Nepal life insurance company limited (NLIC)
3. Life Insurance Corporation (LIC)
4. Shikhar Insurance Company Limited (SICL)
5. NLG Insurance Company Limited (NLG)

The selection of the sample listed insurance companies not undergone merger till date ensures reliability and integrity of financial statement data for the selected companies. This helps to avoid situation of missing or inconsistent data that can affect the research analysis. In

this study, one-third ( $1/3^{\text{rd}}$ ) of these total unmerged listed companies from each category have been selected, out of the total population.

### 3.3. Nature and sources of data

For comprehensive analysis, this study draws data from multiple reliable sources that include financial statements, NEPSE, NRB reports, reports by central bureau of statistics, world bank reports, etc. This study organizes financial data directly from the annual reports and audited financial statements of listed insurance companies. The variables like ROE, earnings per share (EPS), dividends per share (DPS), and market to book value per share and price earnings (P/E) have been calculated based on these reports. Whereas, market price data for insurance company stocks will be obtained from the annual reports of NEPSE. This data allows us to analyze market behavior and calculate independent variables relation with others. This study also incorporates macroeconomic factors, such as the inflation, GDP growth rate, and interest rate which may impact stock price behavior. These data are extracted from website of various reliable published reports like world bank, Central Bureau of Statistics (CBS), NRB, etc. Therefore, by analyzing data from these sources, it provides a strong argument for various determinants of stock price behavior based on these diverse data sources for the research.

### 3.4. Research Framework and variables

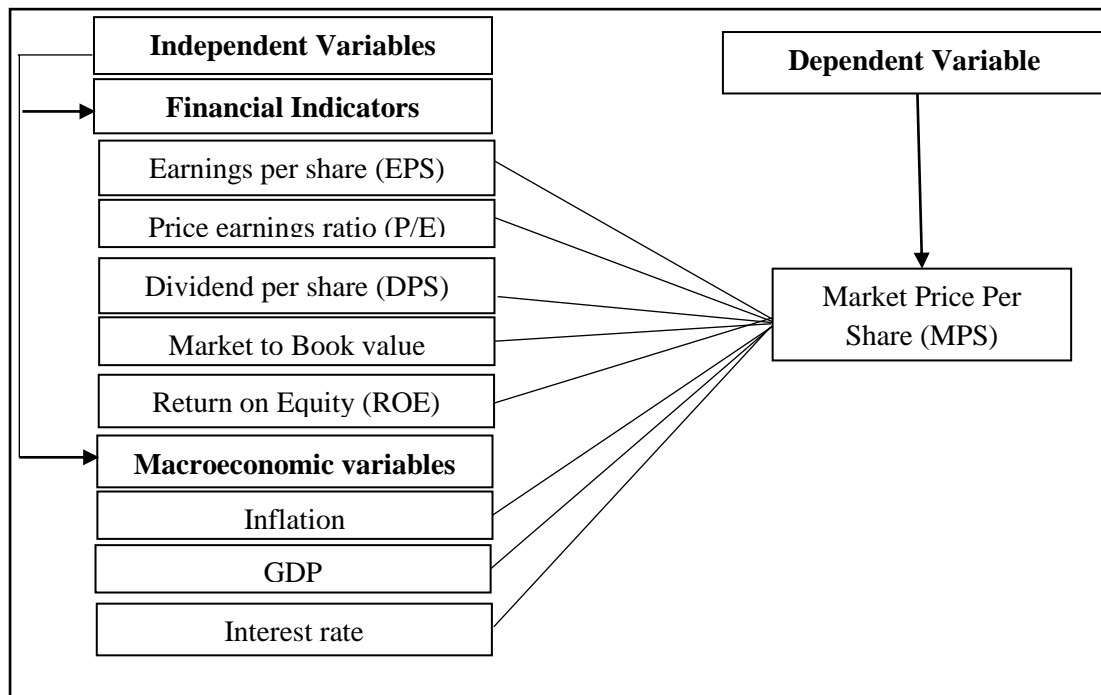


Figure 1: Research Framework of the study

Source: Bhattarai (2018); Maskey (2022); Ali (2014)

### 3.5. Method of analysis

The financial and statistical analysis tools have been utilized for analyzing the quantitative data for this study. The data are displayed in tabular form as well as graphical representations whereas analyzing and interpretation has been performed based on calculation results of financial and statistical tools as described below.

#### Financial tools

##### Capital Asset Pricing Model (CAPM)

CAPM, initially introduced by Sharpe (1964), shows what the expected return on a stock of a company should look like and compare it with the actual return. This model was later further developed by joint efforts of various scholars. Treynor (1961, 1962) showed how it provided valuable insight to the study by further helping to understand how the interactions of various systematic risk factors influence the stock price behavior. Calculating beta and including CAPM in the study helps better understand stock's sensitivity to market movements, which is a crucial financial indicator. Several papers followed afterwards such as by Lintner (1965), Mossin (1966) whose contributions further led to development and practical implications of the model. So, it also takes into account market risk premium and risk-free return which are the major macroeconomic variable of the study. Thus, it is complimentary to analysis of financial indicators and macroeconomic variables on stock price provides comprehensive understanding of stock pricing. CAPM is calculated using following formula:

$$\text{Expected return (Ke)} = Rf + \beta * (Rm - Rf)$$

Whereas,

$$Rf = \text{risk free rate of return} \quad \beta = \text{measure of systematic risk} \quad Rm = \text{market return}$$

##### Earning Price Per Share (EPS)

EPS is derived by dividing the total earnings available for equity shareholders by outstanding number of equity shares which is a widely used metric for analysis as proven by Amira (2022), Yusuf (2023), kail and Rahman (2018). The listed companies are required by the standards to disclose their EPS and diluted EPS (if applicable) in their reports. The decision criteria are based on higher ratio. So, higher the ratio is, the better. It shows the real potential of the company and is one of the main indicators for this study.

Mathematically,

$$\text{EPS} = \frac{\text{Earnings available to equity}}{\text{Outsanding number of equity shares}}$$

### **Dividend per share**

Amira (2022) and Yusuf (2023) are one of many scholars who used it as an independent variable to see its effect on stock. It is the ratio of total dividend distributed to outstanding number of equity shares. Mathematically,

$$\text{DPR} = \frac{\text{Dividend per share of the company}}{\text{Earning per share of the company}}$$

### **Price Earnings Ratio**

PE ratio, also known as the price earnings ratio, is the ratio of market price of the share divided by the earnings per share of the company. It is widely used in valuation to determine whether the shares are overpriced or underpriced.

Mathematically,

$$\text{PE ratio} = \text{Market price per share} \div \text{No. of shares outstanding}$$

### **Market to Book Value per share**

Market to book value ratio of current market value to its corresponding book value of share at the given period of time. kail and Rahman (2018) used this financial tool to carry out their analysis.

Mathematically,

$$\text{MV/BV Ratio} = \text{Net worth} \div \text{No. of outstanding shares}$$

### **Return on Equity (ROE)**

ROE is the ratio of market price of the share divided by the earnings per share of the company. Deshar (2021) considered ROE as one of the most important determinants to analyze behavior of stock. It is widely used in valuation and to determine how well the company is performing without adding external debt. Mathematically,

$$\text{ROE} = \text{Earnings per share} \div \text{Total Equity per share}$$

### **Market to book value per share**

Market to book value ratio is the ratio of market price per share to book value per share which shows, the future direction of a stock. In the studies by kail and Rahman (2018), Khadka (2023) it is taken to determine how it affects the stock. As for decision criteria, a

ratio of less than one shows market value is less than book value indicating a potential undervaluation. Mathematically,

Market to book value per share = Market price per share ÷ Book value per share

### **Statistical Tools**

Statistical tools such as SPSS software and excel are used to conduct statistical analysis in order to determine interactions of different variables and relation amongst one another. These provide the means to analyze the relationship between the variables. For this study, the following statistical tools have been used:

### **Descriptive analysis**

It shows the descriptive data of various quantum like standard deviation, maximum, minimum, mean, skewness, kurtosis, etc. which will enable us to describe various variables of sample companies within the insurance industry. Based on existing empirical studies review, a scholar Mahdzan (2017) performed the data analysis using this method to define various results. For this purpose, excel and other data analysis tool packs have been used.

#### *Arithmetic mean*

It can be calculated as follows:

$$\text{Mean}(\bar{X}) = \frac{\sum X}{N}$$

Where,

$\bar{X}$  = Arithmetic Mean or average

$\sum X$  = Sum of values of all items in the series &

N = Number of data

#### *Standard Deviation*

Mahdzan (2017) used standard deviation as a tool to measure the variability in data distributions. It measures the variation in relation to the mean. It is denoted by 'σ' as sigma. It can be calculated as follows;

$$\text{Standard deviation } (\sigma) = \sqrt{\frac{\sum(X - \bar{X})^2}{N}}$$

Where,

σ = Standard deviation

$\sum(X - \bar{X})^2$  = Sum of squares of the deviations from mean.

N = Number of data

### **Coefficient of Variation**

Canchola, Tang, Hemyari, Paxinos and Marins (2017), in their study, used it to measure the quantity of dispersion of data from mean in terms of percentage. The higher the coefficient, greater the variation. Decision criteria is based on lower value. Mathematically,

$$CV = \frac{\sigma}{\bar{X}}$$

*Source: Canchola, Tang, Hemyari, Paxinos and Marins (2017)*

Where,

CV = Coefficient of Variation

$\sigma$  = Standard Deviation

$\bar{X}$  = Arithmetic Mean or average

### **Correlation analysis**

Kader and Franklin (2008) performed a study using the correlation analysis to show the relationship between and amongst all the variables. The coefficient value of correlation lies in between 1 to -1. If the correlation coefficient (r) is; <0.3, <0.7 and <1, it shows weak, moderate and strong correlation, respectively. Correlation coefficient can be calculated as:

$$r = \frac{COV(X,Y)}{\sigma_x \sigma_y}$$

Note:     r = correlation coefficient                     x = independent variables  
               y = dependent variables                     n = number of periods

### **Regression Analysis**

Galton (1885) introduced concept of regression analysis to the world to analyze the relationship between variables. It shows the linear relationship between dependent and independent variable and is used for the prediction purpose.

The regression equation can be expressed as:

$$Y = a + b_1 * X_1 + b_2 * X_2 + \dots + b_n * X_n$$

where, a is the y-intercept and b represents the regression coefficients

Y is the dependent variable and,

X represents independent variable

## CHAPTER-IV

### RESULTS AND DISCUSSION

In order to meet the objectives mentioned in the first chapter of the study, necessary and relevant data have been collected from official secondary sources to ensure integrity. The study's main focus is to understand stock price behavior of the listed insurance companies relative to selected variables. The data have been presented, analyzed and interpreted in this chapter by utilizing the methodologies mentioned in chapter III. This chapter has been divided into two main sections; the first section covers results of analysis while the next deals with discussions.

#### 4.1 Results

##### Financial analysis

##### Capital Asset Pricing Model (CAPM)

CAPM, initially introduced by Sharpe (1964), shows what the expected return on a stock of a company should look like and compare it with the actual return. This model was later further developed by joint efforts of various scholars. Treynor (1961, 1962) showed how it provided valuable insight to the study by further helping to understand how the interactions of various systematic risk factors influence the stock price behavior. Calculating beta and CAPM returns in the study helps to better quantify stock's sensitivity to market movements, which is the objective of the study. This method acts as complimentary to analysis of financial indicators and macroeconomic variables on stock price by providing comprehensive understanding of stock pricing. CAPM is calculated using following formula:

$$\text{Expected return (Ke)} = Rf + \beta * (Rm - Rf)$$

Whereas,

$Rf$  = risk free rate of return     $\beta$  = measure of systematic risk     $Rm$  = market return

Table 2

*Ke and Actual Returns of Sampled Insurance Companies**Amt. In NPR*

<b>Particulars</b>	<b>LIC</b>	<b>ALIC</b>	<b>NLICN</b>	<b>SICL</b>	<b>NLG</b>
Covar. (stock, market)	0.07	0.39	0.06	0.14	0.13
Market Variance ( $\sigma^2$ )	0.29	0.29	0.29	0.29	0.29
Beta ( $\beta$ )	0.21	0.24	0.44	0.49	1.34
Nature of stock	Defensive	Defensive	Defensive	Defensive	Aggressive
Risk free Rate (Rf)*	4.06%	4.06%	4.06%	4.06%	4.06%
CAPM return (Ke)	7.79%	8.42%	12.00%	12.81%	28.28%
Actual return	-2.72%	46.70%	-2.34%	7.13%	16.47%
<b>Result</b>	<b>Overpriced</b>	<b>Underpriced</b>	<b>Overpriced</b>	<b>Overpriced</b>	<b>Overpriced</b>

*Source: NEPSE Annual Reports*

Note:

LIC= Life insurance corporation, ALIC=Asian life insurance, NLICN=Nepal life insurance company, SICL= Shikhar insurance company, NLG= NLG insurance company

Table 2 shows the analysis of returns under CAPM and actual returns. Based on the CAPM model, the expected returns (Ke) for the sample companies LIC, ALIC, NLICN, SICL, and NLG were calculated to be 7.79%, 8.42%, 12.00%, 12.81%, and 28.28%, respectively. However, the actual annual returns based on annual stock prices for these companies are 2.72%, 46.70%, -2.34%, 7.13%, and 16.47%. After comparing these returns, it was found that LIC, NLICN, SICL, and NLG are overpriced, as their actual returns are significantly lower than the expected returns. Whereas, ALIC is underpriced, with an actual return of 46.70%, which is substantially higher than the expected return of 8.42%. This analysis suggests that ALIC offers a better investment opportunity, while the other companies do not meet the expected performance based on the CAPM model. The following diagram shows the graphically representation of the analysis:

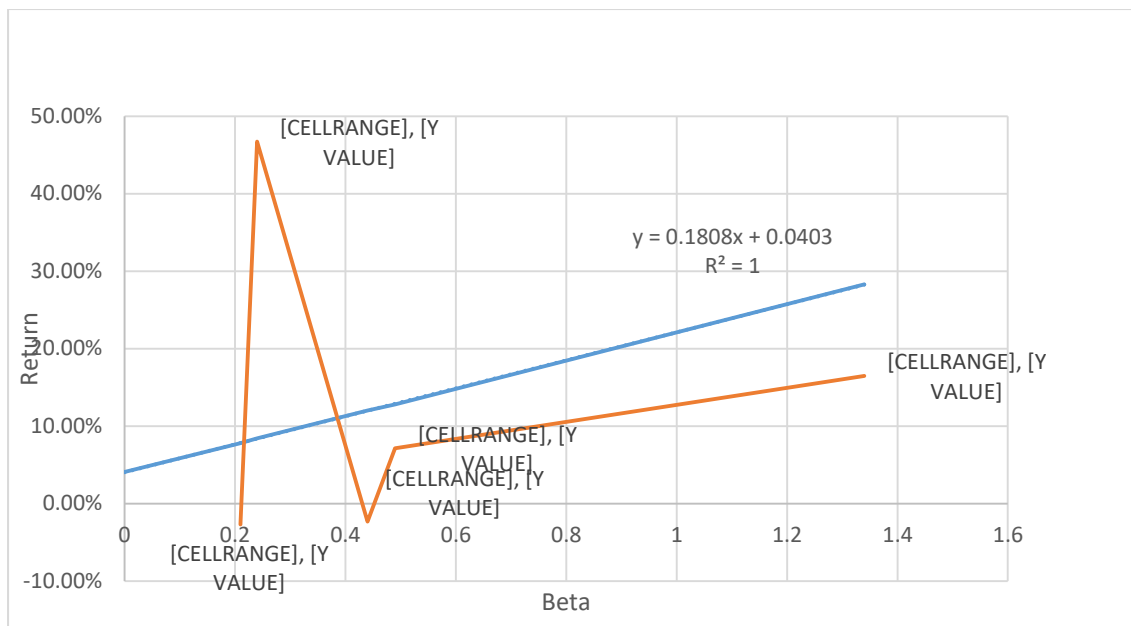


Figure 2: Graphical representation of CAPM model data analysis

Note: X-axis: beta ( $\beta$ )      Y-axis: Annual Return

In the above diagram, x axis represents the  $\beta$  values of different stocks, which measure their volatility relative to the market and y axis shows the return (%) of the stocks. The coordinate LIC (0.21,46.70%) shows the LIC stock has a high return, indicating it performing better compared to its beta. The coordinates SICL (0.49,7.13%) and ALIC (0.24,16.47%) show a moderate return and shows SICL stock is overpriced, NLG (1.34, -2.34%) and NLICN (0.44,-2.72%) are below the security market line which show that NLG and NLICN's stock has a negative return, suggesting it underperformed or overpriced.

### Earnings per share (EPS)

The earning per share has been calculated based on the data derived from secondary sources for analysis and the results of analysis using financial tools have been presented below:

Table 3

*EPS of Sampled Insurance Companies*

	Amt. in NPR				
<b>Year\ Company</b>	<b>LIC</b>	<b>ALIC</b>	<b>NLICN</b>	<b>SICL</b>	<b>NLG</b>
2070-71	29.60	14.41	56.67	59.22	58.19
2071-72	29.11	4.66	30.42	99.19	44.74
2072-73	30.00	15.80	41.83	138.48	56.00
2073-74	10.70	8.31	32.44	162.60	45.09
2074-75	105.38	7.27	22.00	180.34	38.39
2075-76	19.85	15.26	20.00	181.30	31.61
2076-77	35.81	13.38	15.00	28.39	25.73
2077-78	33.70	16.80	27.00	18.15	14.66
2078-79	38.07	22.10	1.18	14.47	15.97
2079-80	28.40	10.78	24.50	8.52	14.26
Mean	36.06	12.88	27.10	89.07	34.46
SD	23.17	4.68	13.59	64.97	15.03
C.V.	0.64	0.36	0.50	0.73	0.44

*Source: Annual Reports of Selected Insurance Companies*

Note: C.V = coefficient of variation, SD = Standard deviation, LIC= Life insurance corporation, ALIC=Asian life insurance, NLICN=Nepal life insurance company, SICL= Shikhar insurance company, NLG= NLG insurance company

Table 3 shows the tabular representation of earning per share of sampled insurance companies. Based on the above table, it can be seen that SICL has the highest eps (89.07) with highest standard deviation (64.97) and C.V. (0.73). Similarly, eps (12.88), standard deviation (4.68) and coefficient of variation (0.36) of ALIC is the lowest. It means that ALIC's is providing fairly stable returns at low risk and variability which will be more attractive for a risk averse investor. However, a risk seeker investor may prefer SICL but ALIC shows more stability while SICL seems to be the best choice for risk seeking investors since it has a higher risk and variability.

#### **Market to Book Value per share (BVPS)**

The book value per share data have been derived from secondary sources whereas stock price has been derived from the stock exchange annual reports. The analysis and interpretation of the results has been presented below:

Table 4

*Ratios of Sampled Insurance Companies*

		Amt. in NPR				
<b>Year\ Company</b>	<b>LIC</b>	<b>ALIC</b>	<b>NLICN</b>	<b>SICL</b>	<b>NLG</b>	
2070-71	1.63	1.24	2.49	3.55	3.78	
2071-72	1.11	1.01	1.95	1.91	2.34	
2072-73	0.44	0.29	0.76	1.03	2.14	
2073-74	0.81	9.95	1.51	1.34	5.97	
2074-75	0.48	3.93	3.59	1.00	4.11	
2075-76	6.94	2.98	5.35	0.66	2.91	
2076-77	7.37	1.84	9.79	0.68	2.87	
2077-78	11.73	8.08	12.47	1.12	5.13	
2078-79	7.15	4.04	6.32	0.38	2.26	
2079-80	6.90	6.44	5.18	0.38	4.10	
Mean	4.46	3.98	4.94	1.21	3.56	
SD	3.63	2.92	3.41	0.85	1.16	
C.V.	0.81	0.73	0.69	0.71	0.33	

*Source: Annual Reports of Selected Insurance Companies*

Note: C.V = coefficient of variation, SD = Standard deviation, LIC= Life insurance corporation, ALIC=Asian life insurance, NLICN=Nepal life insurance company, SICL= Shikhar insurance company, NLG= NLG insurance company

Table 4 shows the tabular representation of market to book value per share of sampled insurance companies. Based on the above table, it can be seen that NLICN has the highest mean (4.94) indicating highest average market to book value while NLG has the least standard deviation (0.85) which signifies fairly lower variability. Similarly, SICL, in spite of low mean (1.21), has the lowest standard deviation (0.85) which shows it has lower variability.

### **Return on equity (ROE)**

The following table summarizes the ROE ratio book value per share data have been derived from secondary sources. The analysis and interpretation of the results has been presented below:

Table 5  
ratios of Sampled Insurance Companies

	Amt. in NPR				
<b>Year\Company</b>	<b>LIC</b>	<b>ALIC</b>	<b>NLICN</b>	<b>SICL</b>	<b>NLG</b>
2070-71	0.012	0.014	0.032	0.224	0.255
2071-72	0.012	0.005	0.021	0.275	0.187
2072-73	0.009	0.012	0.026	0.215	0.219
2073-74	0.004	0.057	0.021	0.203	0.181
2074-75	0.031	0.042	0.099	0.184	0.170
2075-76	0.086	0.119	0.119	0.156	0.121
2076-77	0.198	0.095	0.117	0.019	0.112
2077-78	0.169	0.101	0.175	0.010	0.062
2078-79	0.192	0.155	0.010	0.007	0.076
2079-80	0.126	0.093	0.170	0.004	0.070
Mean	0.084	0.069	0.079	0.130	0.145
SD	0.073	0.046	0.058	0.097	0.061
C.V.	0.872	0.667	0.739	0.749	0.417

*Source: Annual Reports of Selected Insurance Companies*

Note: C.V = coefficient of variation, SD = Standard deviation, LIC= Life insurance corporation, ALIC=Asian life insurance, NLICN=Nepal life insurance company, SICL= Shikhar insurance company, NLG= NLG insurance company

Table 5 shows the tabular representation of return of equity of sampled insurance companies. Based on the above table, it can be seen that NLG has the highest mean (0.145) with the lowest coefficient of variation (0.417). It means that this company is performing the best with both high ROE as well as least variability.

### **Price earnings ratio (PE)**

The following table summarizes the PE ratio of the data derived from secondary sources whereas the stock price data collected from the annual reports of the stock exchange. The results of analysis and interpretation of the results has been presented below:

Table 6 presented below shows the tabular representation of return of equity of sampled insurance companies. Based on the above table, it can be seen that NLICN has the highest PE ratio (117.13) which means it has the highest market value in proportion to its earning per share. Similarly, LIC has the lowest CV (0.596) showing more stability with a relatively good PE (84.858) whereas NLG has the lowest standard deviation, showing the least riskiness. Thus, it shows that LIC has the most balanced structure than that of others.

Table 6

*Ratios of sampled insurance companies*

	Amt. in NPR				
<b>P/E ratio</b>	<b>LIC</b>	<b>ALIC</b>	<b>NLICN</b>	<b>SICL</b>	<b>NLG</b>
2070-71	138.000	86.738	76.784	15.872	14.830
2071-72	96.000	217.446	94.859	6.956	12.494
2072-73	119.000	23.834	28.920	4.768	9.811
2073-74	201.028	175.451	70.889	6.581	32.936
2074-75	15.392	93.948	36.318	5.462	24.225
2075-76	80.605	25.098	45.050	4.253	24.106
2076-77	37.140	19.432	84.000	35.893	25.534
2077-78	69.496	80.238	71.074	107.548	83.220
2078-79	37.168	25.973	633.051	55.771	29.931
2079-80	54.754	69.119	30.367	99.178	58.906
Mean	84.858	81.728	117.131	34.228	31.599
SD	50.584	61.116	165.334	36.307	20.633
C.V.	0.596	0.748	1.412	1.061	0.653

*Source: Annual Reports of Selected Insurance Companies*

Note: C.V = coefficient of variation, SD = Standard deviation, LIC= Life insurance corporation, ALIC=Asian life insurance, NLICN=Nepal life insurance company, SICL= Shikhar insurance company, NLG= NLG insurance company

**Dividend per share (DPS)**

The following table summarizes the dividend per share of the data derived from secondary sources of sampled insurance companies. The results of analysis and interpretation of the results has been presented below:

Table 7 shows the tabular representation of dividend per share of sampled insurance companies. Based on the above table, it can be seen that LIC and ALIC have similar mean values (13.987 and 14.452) but CV (0.765) and SD (10.765) of LIC are the relatively low between the two. Even though NLG has the lowest DPS (11.179), its SD (6.793) and CV (0.608) are the lowest which more stability in returns at least risk. Thus, LIC appears to be the best choice in terms of relatively high DPS of 13.987 with relatively low deviation and variation.

Table 7

*Ratios of Sampled Insurance Companies*

	Amt. in NPR				
<b>DPS</b>	<b>LIC</b>	<b>ALIC</b>	<b>NLICN</b>	<b>SICL</b>	<b>NLG</b>
2070-71	31.579	30.000	68.000	26.898	9.091
2071-72	26.320		26.316	28.252	13.043
2072-73		21.053	30.075	63.158	16.667
2073-74	19.872		70.526	30.526	20.000
2074-75		16.667			20.000
2075-76	10.714	37.500			
2076-77	25.630		23.664		
2077-78	9.091			21.838	6.542
2078-79	16.667	19.792			17.355
2079-80		19.506		13.894	9.091
Mean	13.987	14.452	21.858	18.457	11.179
SD	10.705	12.472	25.185	18.355	6.793
C.V.	0.765	0.863	1.152	0.994	0.608

*Source: Annual Reports of Selected Insurance Companies*

Note: C.V = coefficient of variation, SD = Standard deviation, LIC= Life insurance corporation, ALIC=Asian life insurance, NLICN=Nepal life insurance company, SICL= Shikhar insurance company, NLG= NLG insurance company

### **Statistical Analysis**

#### Descriptive analysis

It has been used for the purpose of summarizing the data in order to make it more presentable and understandable. In the study the sampled insurance companies' data are measured using this tool to understand their pattern, tendency and measures of variability of mean, maximum, minimum, standard deviation, skewness and kurtosis. The table below presents summary of descriptive analysis of major dependent and independent variables.

Table 8 provides a comprehensive overview of main financial indicators and macroeconomic variables based on the descriptive analysis generated from the sample data in Excel. The mean values of entire sample of share price are at 1272.77, EPS at 39.91, market to book value is 3.62, ROE at 10%. The table shows high PE ratio and DPS at 69.9 and 15.98 while it is notable that the macro-economic variables show low values of means as shown in the table. This suggests that the sample includes companies display substantial earnings and share prices. The median values, as shown above, further support this observation. The standard

deviation highlights the variability within the data, with the share price showing significant dispersion (SD = 855.20). Similarly, with the highest kurtosis value of 4.52, PE ratio represents a tail with high peaks in comparison to normal distribution. Similarly, its skewness value shows showing a right skewed distribution. This means that right tail is longer and flatter than the left tail. The range of values, from minimum to maximum shows the diversity within the sample, with share prices ranging from 260 to 4351, EPS from 1.18 to 181.2, and other variables as it can be seen from the table. So, these statistical summary help to provide a detailed understanding of the sample data, its dispersion, and distribution, which are essential for comparing, analyzing the impact of on stock prices. These are helpful to identify patterns and trends that may influence financial strategies.

Similarly, the analysis of the macroeconomic variables: inflation, GDP, and interest rate reveals mean values for inflation, GDP, and interest rate are 0.060, 0.046, and 0.038, respectively, indicating the averages of the selected sample data. The median values are 0.062 for inflation, 0.046 for GDP, and 0.030 for interest rate, which shows that the data is relatively symmetrically distributed. The standard deviation of inflation shows a moderate variability (SD = 0.018) while GDP shows lower variability (SD = 0.025), and interest rate showing a similar level of dispersion (SD = 0.031). The kurtosis values of inflation and interest rate and GDP shows negative kurtosis (-0.31 and -0.38, -0.87 respectively), which indicate that the distribution is relatively flat. The skewness values for inflation (0.61) and interest rate (0.94) are positively skewed, while GDP is close to being symmetrical (i.e. 0.004). The range of minimum to maximum values for inflation range from 0.036 to 0.099, GDP from 0.004 to 0.089, and for interest rate is 0.002 to 0.101.

Table 8

*Descriptive Analysis of Sampled Insurance Companies**Amt. In NPR*

	Share price	EPS	Market to BVPS	ROE	P/E ratio	DPS	Inflation	GDP	Interest rate
Mean	1272.77	39.91	3.62	0.10	69.90	15.98	0.060	0.046	0.038
Median	999	27.69	2.68	0.096	41.10	15.28	0.062	0.046	0.030
SD	855.20	43.01	3.11	0.08	95.02	17.41	0.018	0.025	0.031
Kurtosis	4.28927	4.57	0.68	-1.11	25.57	2.51	-0.31	-0.87	-0.38
Skewness	1.932	2.257	1.13	0.33	4.52	1.45	0.61	0.004	0.94
Minimum	260	1.18	0.289	0.004	4.25	0	0.036	0.004	0.002
Maximum	4351	181.2	12.5	0.27	633.1	70.5	0.099	0.089	0.101

*Source: Annual Reports of Selected insurance companies and data analysis using Excel*

### Correlation analysis

Correlation analysis has been performed to measure strength of relationship between dependent and independent variables. It quantifies and predicts the relationship between and amongst variables. So, in order to assess the correlation between the dependent and independent variables, Pearson's correlation coefficient has been calculated as shown in the table below:

Table 9

#### *Correlation Analysis Matrix*

	<i>MPS</i>	<i>EPS</i>	<i>Market to BVPS</i>	<i>ROE</i>	<i>P/E ratio</i>	<i>DPS</i>	<i>Inflation</i>	<i>GDP</i>	<i>Interest rate</i>
<i>MPS</i>	1.00								
<i>EPS</i>	(0.05)	1.00							
<i>Market to BVPS</i>	0.07	(0.29)*	1.00						
<i>ROE</i>	(0.34)*	0.49**	0.32*	1.00					
<i>P/E</i>	0.17	(0.37)**	0.15	(0.47)**	1.00				
<i>DPS</i>	0.40**	0.15	(0.23)	0.01	(0.13)	1.00			
<i>Inflation</i>	(0.13)	(0.11)	(0.19)	(0.06)	0.21	(0.04)	1.00		
<i>GDP</i>	(0.02)	0.16	(0.02)	(0.02)	(0.15)	0.14	(0.51)**	1.00	
<i>Interest rate</i>	(0.21)	(0.31)*	0.30*	(0.04)	0.20	(0.29)*	0.48**	(0.41)**	1.00

*Source: Annual Reports of Selected insurance and output using Excel*

Note: \*Correlation is statistically significant at 0.05 level

\*\* Correlation is statistically significant at 0.01 level

Table 9 shows a weak negative correlation between MPS and EPS (-0.05) and between MPS and market-to-book value per share ratio shows a weak positive correlation ( $r = 0.07$ ) with share prices which implies that it has a negligible impact on share prices.

ROE shows a moderately negative correlation value of -0.3397 with share prices indicating a significant relation at the 0.05 significance level. It means that higher ROE is associated with lower share prices. The P/E ratio shows a weak positive correlation of 0.17 with share prices indicating its negligible influence on the dependent variable. At 0.01 significance level, DPS shows statistically significant relation with a positive correlation of 0.3998. This value shows that higher the dividend yield, higher the stocks prices are. Similarly, Inflation, GDP and interest rates show a weak negative correlation of -0.13, -0.02, and -0.21, respectively with share prices. This suggests that higher inflation rates, GDP or interest can have slight inverse impact on share prices but, it is more likely due to a chance occurrence, as these variables do

not show statistical significance. As such, these macroeconomic variables have a minimal impact on share prices in this context. However, the correlation matrix shows a positive correlation of 0.48 between interest rate and inflation and similar value of -0.41 and -0.51 for correlation between GDP and these variables, which are statistically significant at 0.01 level suggesting the underlying relation between inflation and interest rates which are crucial in understanding changes in the market due to interactions of these market factors.

### Regression analysis

It analyzes the link between the dependent variable (MPS) and independent variables in order to develop a predictive model.

Table 10  
*Summary Output*

	<i>Regression Statistics</i>
Multiple R	0.7264
R <sup>2</sup>	0.5277
Adjusted R <sup>2</sup>	0.4356
Standard Error	642.4778
Observations	50
Significance F	0.0000661

*Source: Annual Reports of Selected insurance and output using Excel*

Table 10 shows a summary of the relationship between the dependent and independent variables of the study. The multiple R value of 0.726 indicates a strong positive correlation of dependent (financial and macroeconomic) with the independent variable (MPS), suggesting that the model's prediction is accurate with respect to the observed data. The R Square value of 0.528 reveals that approximately 52.8% of the variability in the dependent variable can be explained by the independent variables included in the model. This provides a moderate level of explanation.

The adjusted R<sup>2</sup> value of 0.436 shows a better measure by accounting for a number of predictors in the model, suggesting that appx. about 43.6% of the variability can be explained after considering the complexity and errors. The standard error of 642.478 explains the average distance between the observed values and the regression line. A higher value means that some variability cannot be captured by the model. This sample size of 50 observations shows the adequacy of available data for the regression analysis, providing a strong basis for the results analysis. Similarly, the significance F value (0.000661) is very low suggesting that

the model is statistically significant meaning, there is a low probability of observation results due to random coincidence, i.e. the variables collective show significant influence on the independent variable of the study.

Table 11

*Regression Analysis Results*

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	1,549.59	561.69	2.76	0.0086
EPS	7.94	3.07	2.58	0.0134
Market to BVPS	179.74	45.99	3.91	0.0003
ROE	(8,728.43)	1,922.48	(4.54)	0.0001
P/E ratio	(0.85)	1.24	(0.68)	0.4984
DPS	21.49	5.61	3.83	0.0004
Inflation	1,501.00	6,920.00	0.22	0.8294
GDP	(9,125.30)	4,335.33	(2.10)	0.0415
Interest rate	(7,940.07)	3,919.50	(2.03)	0.0493

*Source: Annual Reports of Selected Commercial Bank and results were drawn using Excel*

Table 11 shows the results of regression analysis conducted on the financial data of selected insurance companies. The intercept, with a coefficient of 1549.59 and a statistically significant p-value of 0.0086, shows a substantial value when all other variables assumed to be constant. The EPS shows a statistically significant positive coefficient of 7.94 with p-value equal to 0.0134. It means that higher earnings per share are associated with higher stock prices, which is the dependent variable. This aligns with the theoretical and empirical findings that profitable firms have higher values. Similarly, the Market to Book Value Per Share (BVPS) ratio, with a highly significant coefficient of 179.74 (p-value = 0.0003), shows the importance of market price relative to book value in determining the stock price. The Return on Equity (ROE) presents a negative relationship (coefficient = -8728.43, p-value = 0.0001), indicating that higher ROE has negative relation with stock price. The result of this analysis is contrary to available studies which conclude, in general, ROE to have a positive influence. But this study confirms the findings of the study by Mogonta and Pandowo (2016) that revealed ROE to have negative impact on share price. Dividends Per Share (DPS) also shows a positive and significant impact (coefficient = 21.49, p-value = 0.0004), confirming the empirical conclusions that showed dividend payouts to be perceived favorably by investors and having significant positive relation with share price. In simpler terms, every 1 unit increase of this variable (DPS) should cause 21.49 times increase in the value of stock price.

However, although the coefficient for inflation is positive (1501), it is not statistically significant because its p-value equals to 0.8294. This shows that inflation does not have a significant impact on the dependent variable. This is as per the findings of our empirical reviews. Similarly, the coefficient for GDP is -9,125.30 and p value 0.0415 are indicating a negative and significant relationship with the dependent variable. In easier words, every 1 unit increase in GDP should cause decreases stock price by 9,125.30 units.

Finally, the results of regression analysis show coefficient for the interest rate is -7,940.07 which means, other variables remaining constant, an increase in the interest rate leads to a decrease in the stock price by multiple of that value. Moreover, the t-statistic is -2.03 and the p-value is 0.04930 shows that the relation between interest rate and stock price it is statistically significant at the 5% level which is in line with the past researchers which have been discussed briefly in the discussion paragraph below.

## **4.2 Discussion**

The results show DPS and stock price to be statistically significant at 0.01 significance level with a positive correlation of 0.3998 which means that higher the dividend yield, higher the stocks prices of the company. This is similar to the study by Nim and Frank (2023) and Bhattarai (2018) which concluded dividend to have significant positive relation with the share price. ROE shows a statistically significant negative correlation of -0.34 at 0.01 level. This is similar to the findings of Bakhri and Yusuf (2023) that concluded ROE showed significant negative effect on the stock price but Inim and Frank (2023) concluded that ROE contributed positively to the share price. The results of P/E with share price shows a positive correlation with share prices which is in line with the findings of Ramij and Das (2021) as well as proves the conclusion reached by Niraula (2021) which concluded favorable impact of PE on share price.

The result shows a negative correlation between EPS and the stock price. It is similar to the findings of Khan and Adnan (2014) which showed EPS not to increase in the same proportion as MPS the reason of which could be attributed to macroeconomic factors which this study also considers. However, this is contrary to the general findings of most studies such as, Bhattarai (2018) which argued positive correlation existed between these EPS and stock price.

Similarly, Inflation shows insignificant and weak negative correlation of -0.13 with share prices meaning it doesn't impact share price. In a similar study, Sharma and Mahendru (2010) also concluded inflation as a macroeconomic variable to not have a significant impact

on stock price behavior which matches exactly with the results of this study. Hamdan Ali (2014) found interest rate to show negative correlation the stock price. The finding of this literature is similar to this study. The GDP shows insignificant negative correlation of -0.02 which is similar to findings of Bakhri and Yusuf (2023). In another study, it was concluded by Al-Eitan and Amira (2022), GDP significantly influence stock price, which conflicts with the findings of existing studies as we as the result of this study.

Regression analysis results of the study shows that all of the selected independent variables are statistically significant whereas inflation is the only variable without significant impact on the stock price. Sharma and Mahendru (2010) also concluded that inflation shows no significance which means that the study confirms the conclusions of existing studies. A study performed by Inim and Frank (2023) and Niroula (2021) showed DPS, ROE, EPS and PE to have favorable effect on stock price which is similar to the results shown by the regression analysis results of the study. The regression analysis shows a multiple R value of 0.726 indicating a strong positive correlation which means that significant part of variation in the dependent variable is caused due to the independent variables collectively. This value shows that the model can be used to make accurate predictive analysis. The value of R Square value of 0.528 reveals that 52.8% of the variability in the dependent variable can be explained by the selected independent variables. Similarly, the significance F value (0.000661) is extremely low suggesting that the model is statistically significant. The similar studies conducted by Bhattarai (2018) and Al-Eitan and Amira (2022) also confirms the fact that regression, descriptive analysis and correlation are the best fit to perform the study to achieve the objectives of the research and answer the research questions. Therefore, the findings of this study confirm with the previous studies by various scholars with certain contradictory results in some cases like ROE, which exhibits a negative relation with stock price. In most of the existing studies it has been concluded that there is a positive relation between ROE and stock price for instance, Deshar (2021), and Frank (2023). However, a study by Mogonta and Pandowo (2016) that revealed ROE to have negative impact on share price is similar to the conclusion drawn by the study which explores impact of both fundamentals and market factors.

Finally, the findings of the study are consistent with the theoretical review of EMH, as significant financial and macroeconomic variables explain a major portion of the variability in stock prices. This suggests that the market for insurance stocks in Nepal is relatively efficient. The CAPM shows how the stock returns are influenced by systematic risk. Amongst the sample companies, ALICN is the only stock which is underpriced which means

an investor can heavily invest in its stock, while selling the rest of the sample companies' stock as these are overpriced. The study has incorporated this model and calculated results to show the position of market price of the sample companies. Similarly, the results of the study are in line with APT, there are several significant predictors, including EPS, ROE, and macroeconomic variables. This approach provides a better understanding of stock price behavior. The findings of the study performed by Wahyuni and Gunarsih (2018) also showed the risk analysis capabilities of CAPM and APT models based on the sample companies, to determine stock pricing of the sample companies. This study also highlights the importance of technical along with the fundamental factors in determining stock prices. It shows consistency with the theoretical principles, emphasizing the need to consider a wide range of indicators. Similarly, Random Walk Theory suggests that stock prices follow a random path and are unpredictable, the implication of which can be seen from the results that indicates certain variables are significantly influencing the stock prices but the value of R-squared value (0.528) under regression analysis confirms the existence of a substantial portion of the cause variability that remains unexplained.

## **CHAPTER-V**

### **SUMMARY AND CONCLUSION**

This chapter provides a summary of findings and conclusions which aims to provide answers to the research questions and briefly discuss the achievement of objectives mentioned in the first chapter of the study. It is divided into three sections. The first section deals with summary of findings, the next deals with conclusion and the final section deals with implications of the study.

#### **5.1 Summary**

It examines the stock price behavior of listed insurance companies in Nepal, focusing on five companies: Life insurance corporation (LIC), Asian life insurance (ALIC), Nepal life insurance company (NLICN), Shikhar insurance company (SICL) and NLG insurance company (NLG). The study investigates the stock price behavior based on financial indicators and macroeconomic indicators as independent variables, including Earnings Per Share (EPS), Return on Equity (ROE), Market to Book Value Per Share (BVPS), Dividend Per Share (DPS), Price to Earnings (PE) ratio, inflation rate, GDP rate, and interest rate, with stock price as the dependent variable. The Capital Asset Pricing Model (CAPM) analysis reveals that ALIC is underpriced, while the other companies are overpriced. Correlation analysis shows mixed relationships between stock prices and the independent variables, with DPS having the highest positive correlation and ROE showing a significant negative correlation. Regression analysis indicates that the chosen model is statistically significant, based on F value, Multiple R, and R Square. It shows that most of the variables are significant predictors of stock price at the 0.05 level, except for inflation. The coefficients for GDP, inflation, PE, and ROE are negative, suggesting an inverse relationship with stock prices.

The analysis is showing a significant negative coefficient for GDP, inflation, PE, and ROE that is suggesting, macroeconomic variables and financial ratios relation with respect to the stock prices. These results highlight an investor's need to consider both indicators when making investment decisions in the Nepalese insurance sector.

The findings highlight the complexity of stock price behavior in the insurance sector, influenced by a combination of company specific financial metrics and broader economic conditions. The positive correlation of DPS with stock prices underscores the importance of dividend policies in investor decision-making. Conversely, the negative correlation of ROE suggests that higher returns on equity might be perceived as a risk factor, potentially due to aggressive business strategies or market conditions.

The study also emphasizes the limited impact of inflation on stock prices within this sector, which could be attributed to the insurance companies' ability to adjust premiums and manage claims effectively in response to inflationary pressures. The negative coefficients for GDP and PE ratio indicate that macroeconomic growth and market valuation metrics play a crucial role in shaping investor expectations and stock price movements.

The research provides valuable insights into the determinants of stock prices for insurance companies in Nepal, offering a nuanced understanding of how financial and economic variables interact. These findings can inform investment strategies, policy making, and further academic research in the field.

The CAPM analysis shows the actual position of market prices of various sample companies. The correlation analysis demonstrates varying degrees of relationships between stock prices and the independent variables. For instance, DPS shows the highest positive correlation with stock prices, while ROE has a significant negative correlation. This confirms that there are indeed relationships among these variables which sheds light into answers to another important research question regarding relationship amongst the variables.

Similarly, the regression analysis shows that most of these variables significantly impact stock prices and this methodology is statistically significant for the purpose of this study. The coefficients for GDP, inflation, PE, and ROE are negative, suggesting an inverse relationship with stock prices. This answers the question regarding the impact of these variables on stock prices.

## **5.2 Conclusion**

The analysis shows that the stock price of listed insurance companies in Nepal is significantly affected by financial indicators and macroeconomic variables like dividend per share,

earnings price earnings as well as gross domestic product and interest rates. The financial analysis based on coefficient of variation and capital assets pricing model reveals that the percentage of variation in distribution of data from their mean of some of the sample companies like ALIC have a better position compared to others and the actual position of stock price of all the companies except ALIC are overpriced. The stock price distribution of the sample companies shows significant variations and unpredictability which reveals that the behavior of the stock price is as explained by the efficiency market hypothesis. The stock price being undervalued is representing potential investment opportunities, while suggesting the other companies should be sold off. The regression analysis, with the value of  $r$  square at around fifty-three percentage underscores that around that parentage of the behavior of stock price are identified and explained by the independent variable selected in the model. The correlation analysis demonstrates varying degrees of relationships between stock prices and the independent variables. For instance, DPS shows the highest positive correlation with stock prices, while ROE has a significant negative correlation. Similarly, the negative coefficients for GDP, inflation, PE, and ROE suggests that the macroeconomic variables and certain financial factors are inversely affecting the stock prices behavior. These results indicate that investors should consider both company-specific financial indicators and broader macroeconomic factors also called systematic risk, when making investment decisions in the Nepalese insurance sector. These results answer the research questions and achieve the primary research objectives of analyzing the stock price behavior in Nepalese stock market. These also confirms the relationships amongst these variables which sheds light into answers to another important research objective of analyzing relationship amongst the variables. The analysis reveals that the GDP, inflation, PE, and ROE with negative coefficients, are suggesting an inverse relationship with stock prices.

### **5.3 Implications**

This study has many implications for various financial aspects. For investors, the findings suggest that ALIC may offer a good investment opportunity due to its undervaluation. Additionally, the significant relationships between stock prices and financial indicators like DPS, ROE, and PE highlight the need for thorough financial analysis when selecting stocks. For policymakers, the inverse relationship between stock prices and macroeconomic variables such as GDP and inflation shows how importance it is to maintain a stable

economy. Financial analysts can use these to refine their models and provide more accurate stock price predictions.

While this study investigates the stock price behavior of listed insurance companies in Nepal, it is important to understand that the inherent limitations in the study prohibits from achieving more conclusive and detailed analysis. Such limitations are sample size, variables selected, data quality, market issues, economy, casual comparative research design focusing on purposive sampling while selecting sample companies.

The study is based on a small sample while larger sample size could provide more generalized results. The analysis is based on data from a specific period. Stock prices and financial indicators can be influenced by many factors and extending the time period of analysis could yield different results. The accuracy and reliability of the results depend on the quality of the data used. The study is conducted in the context of the Nepalese insurance market, which may have unique characteristics. The results may not be directly applicable to other sectors and the choice of methodology could also influence the findings.

By recognizing these limitations, future research can build upon this study to provide a more comprehensive understanding of stock price behavior in the Nepalese insurance sector. Although the study includes several key financial indicators and macroeconomic variables, there may be other relevant factors not considered in this analysis. Future research could explore additional variables such as company-specific events, regulatory changes, or industry trends.

## REFERENCES

- Al-Dwiry, M., Al-Eitan, G. N., & Amira, W. (2022). Factors affecting stock price: Evidence from commercial banks in the developing market. *Journal of Governance & Regulation*, 11(14), 339-3461. doi: 10.22495/jgrv11i4siart14
- Alexander, G. J., Sharpe, W. F., & Bailey, J. W. (2002). *Investments (6th ed.)*. Prentice Hall.
- Ali, H. (2014). Impact of interest rate on stock market: Evidence from Pakistani market. *Iosr Journal of Business and Management (iosrjbm)*, 16(1), 64-96. Retrieved from <https://iosrjournals.org/iosr-jbm/papers/Vol16-issue1/Version-7/I016176469.pdf>
- Anthoni, L., & Sudirman, G. (2021). Factors affecting profit growth in insurance companies listed on the Indonesia Stock Exchange in 2017-2019. *Journal of Economics and Business Letters*, 1-81. doi:10.32479/jeb1.11360
- Arumsari, R., Dewi, R. R., & Siddi, P. (2020). Factors affecting stock prices in insurance companies listed on BEI. *Journal of Business, Management, and Accounting*, 2(1), 1-10. doi: 10.33541/jbma.v2i1.131
- Bakhri, S., Nurbaiti, F., & Yusuf, A. A. (2023). The most influential factors on stock prices in the JII Index. *Jurnal Manajemen*, 27(3), 612-631. doi: 10.24912/jm.v27i3.1300
- Bashyal, J., & Bhandari, N. (2023). Effect of capital structure on financial performance of insurance companies in Nepal. *International Journal of Finance and Commerce*, 35-42. doi:10.21511/ins.14(1).2023.02
- Bejaert, G., & Engstorm, E. (2010). Inflation and the stock market, understanding the “fed model”. *Journal of Monetary Economics*, 57(3), 278-294. Retrieved from <https://www.nber.org/papers/w15024>
- Bell, G. (2024). *The intelligent investor (3rd edition)*. Harper Business.
- Berk C., & Tutarli B. (2020). Modern portfolio theory based on financial analysis. *Universal Journal of Accounting and Finance*, 8(4), 83-91. doi: 10.13189/ujaf.2020.080401
- Bhattarai, B. P. (2018). The firm specific and macroeconomic variables effects on share prices of Nepalese commercial banks and insurance companies. *Review of Integrative Business and Economics Research*, 7(3). Retrieved from <http://buscompress.com/journal-home.html> ISSN: 2304-1013
- Bonga, W. G. (2015). The need for efficient investment: fundamental analysis and technical analysis. *Social Science Research Network (SSRN)*. Retrieved from <http://ssrn.com/abstract=2593315>
- Bradley, E. S., & Teweles, R. J. (1998). *The stock market (7th edition)*. Wiley Publishers.

- Brigham, E. F., & Ehrhardt, M. C. (2024). *Financial management theory & practice (17th ed.)*. Cengage Learning.
- Canchola, J. A., Tang, S., Hemyari, P., Paxinos E., & Marins E. (2017). Correct use of percent coefficient of variation (%cv) formula for log-transformed data, *moj proteomics & bioinformatics*. *MOJ Proteomics & Bioinformatics*, 6(4). Retrieved from [www.academia.edu](http://www.academia.edu)
- Chee, H.Y. (2017). Dividend policy and stock price volatility of industrial products firms in Malaysia. *International Journal of Emerging Markets*, 203-217. doi:10.1108/IJoEM-09-2016-0250
- Chen, N. F., Roll, R., & Ross, S. A. (1986). Economic forces and the stock market. *Journal of Business*, 59(3), 383-403. Retrieved from <https://www.jstor.org/stable/2352710>
- Copeland, Shastri, K., & Weston J. F. (2005). *Financial theory and corporate policy*. Pearson Addison Wesley.
- Deshar, N. (2021). Relationship between fundamental indicators and stock price of Nepalese banks and insurance firms. *Journal of Emerging Technologies and Innovative Research (JETIR)* , 8(9). Retrieved from [www.jetir.org](http://www.jetir.org) (ISSN-2349-5162)
- Edet, I. V. (2023). Fundamental factors and stock price volatility of listed banking firms in Nigeria. *Economy*, 1-9. doi: 10.20448/economy.v10i1.4517
- Elbannan, M. A. (2015). The capital asset pricing model: An overview of the theory. *International Journal of Economics and Finance*, 7(1), 216-228. doi: 10.5539/ijef.v7n1p216
- Fama, E. F. (1981). Stock returns, real activity, inflation, and money. *American Economic Review*, 71(4), 545-565.
- Fama, E. F., & French, K. R. (2001). Disappearing dividends, changing firm characteristics or lower propensity to pay? *Journal of Financial Economics*, 60 (1), 3-43. doi: [https://doi.org/10.1016/S0304-405X\(01\)00038-1](https://doi.org/10.1016/S0304-405X(01)00038-1)
- Fatima, R., Islam, M. & Ahmed T. (2018). Theories explaining stock price behavior, a review of the literature. *International Journal of Islamic Banking and Finance Research*, 2(2). doi: <https://doi.org/10.46281/ijibfr.v2i2.215>
- Gautam, A. (2019). Factors affecting share price of Nepalese non-life insurance companies. *Nepalese Journal of Insurance and Social Security*. doi: <https://doi.org/10.3126/njiss.v2i2.31826>
- Gitman, L. J. (2001). *Principles of managerial finance (10th ed.)*. Addison Wesley.

- Gunarshi, T. W., & Wahyuny, T. (2020). Comparative analysis of accuracy between capital pricing model and arbitrage pricing theory. *Journal of Applied Economics in Developing Countries*, 5(1).  
Retrieved from <https://jurnal.uns.ac.id/jaedc/article/view/53442>
- Jaishi, B., & Poudel, R. L. (2021). Impact of firm specific factors on financial performance: comparative study of life and non-life insurance companies in Nepal. *Prithvi Academic Journal*, 39-55. doi: <https://doi.org/10.3126/paj.v4i0.37014>
- Kader, G., & Franklin, C. (2008). The evolution of pearson's correlation coefficient. *The Mathematics Teacher*, 102(4). doi: <https://doi.org/10.5951/mt.102.4.0292>
- Karki, D., Kumar, R., Bhattarai, G., & Balla, S. (2023). Performance evaluation of technical analysis in the Nepalese stock market: implications for investment strategies. *Quest Journal of Management and Social Sciences*. doi: <https://doi.org/10.3126/qjmss.v5i1.56295>
- Kerlinger, F. N. (1973). *Foundations of behavioral research (2nd edition)*. Wiley Publishing, Inc. .
- Khadka, A. (2021). Share price behaviour of Nepalese insurance companies. *NCC Journal*, 6(1), 35-42. doi: <https://doi.org/10.3126/nccj.v6i1.57814>
- Khan, T., & Islam, R. (2014). How earning per share (eps) affects on share price and firm value. *European Journal of Business and Management*, 6(17). Retrieved from [www.iiste.org](http://www.iiste.org) issn 2222-1905 (paper) issn 2222-2839 (online)
- Khanji, I. M. (2015). The effect of cash flow on share price of the Jordanian commercial banks listed in Amman Stock Exchange. *International Journal of Economics and Finance*, 109-132. doi:10.5539/ijef.v7n5p109
- Khoo, D. K., & Rahman I. B. (2018). The impact of financial indicators towards stock returns of finance companies listed on Bursa Malaysia. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 128-140. doi: 10.6007/IJARAFMS/v8-i3/4546
- Kothari, C. R. (2004). In *research methodology, methods and techniques*. New Age International.
- Kothari, S. P. (2001). Capital markets research in accounting. *Journal of Accounting and Economics*, 105-231. doi: [https://doi.org/10.1016/S0165-4101\(01\)00030-1](https://doi.org/10.1016/S0165-4101(01)00030-1)
- Lamichhane, P. (2024). Impact of firm's fundamentals on return of stocks in Nepal. *Journal of Mathematics Instruction, Social Research and Opinion*, 3(1), 13–2. doi: <https://doi.org/10.58421/misro.v3i1.174>ISSN 2962-7842

- Lodhi, S. (2014). Factors influencing investor behaviour. *IOSR Journal of Business and Management (IOSR-JBM)*, 16(2), 68-76. doi: <https://doi.org/10.9790/487X-16236876>
- Mladjenovic, P. (2006). *Stock investing for dummies (2nd edition)*. Holt, Rinehart and Winston.
- Mogonta, K., & Pandowo, M. (2016). Analysing the effect of return on assets, return on equity and earnings per share on market share price: A study of Iq-45 mining companies listed on Indonesia Stock Exchange. *Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 4(2), 641- 767. doi: <https://doi.org/10.35794/emba.4.2.2016.13150>
- Msomi, T. S. (2023). Analyzing firm-specific factors affecting the financial performance of insurance companies in South Africa. *Insurance Markets and Companies.*, 8-21. doi:10.21511/ins.14(1).2023.02
- Niroula, B. (2021). Stock price behavior of commercial banks in Nepal. *Patan Pragya*, 8(1). doi:10.3126/pragya.v8i01.42333
- Panthi, B., & Chalise, A. (2021). Development and challenges of capital market of Nepal. *Nepalese journal of management research*, 1(1). doi: 10.5929/2014.4.2.9
- Pešík, P. (2022). The effect of financial Indicators on share price of largest US companies. *Knowledge on Economics and Management*. doi:10.12345/kem.2022.123456
- Pjanić, M. (2023). Profitability determinants of life insurance companies in the Republic of Serbia. *International Journal of Strategic Management and Decision Support Systems in Strategic Management*. doi: 10.5937/StraMan2300041P
- Ramij, M. (2021). An empirical study on microeconomic factors affecting stock price: a study on insurance companies listed in Dhaka Stock Exchange. *Khulna University Business Review (KUBR)*, 16(1), 25-47. doi: 10.35649/KUBR.2021.16.1.2
- Sanam, M. (2022). Determinants of share prices: a case study of listed life insurance companies in Nepal Stock Exchange. *Journal of Business and Management Research*, 49-60. doi:10.3126/jbmr.v4i01.46682
- Schmidt, D. (2019). Stock market rumors and credibility. *The Review of Financial Studies*. 33(8), 3804-3853. doi: <https://doi.org/10.1093/rfs/hhz120>
- Sharma, G. D., & Mahendru, M. (2010). Impact of macro-economic variables on stock prices in India. *Global Journal of Management and Business Research*. 10(7), Retrieved from <https://ssrn.com/abstract=1827462>

- Shrestha, P. K., & Subedi B. R. (2015). Determinants of stock market performance in Nepal. *Economic review*, 26(2), 25. Retrieved from <https://www.nrb.org.np/er-article/determinants-of-stock-market-performance-in-nepal/>
- Siegel, J. (1998). Valuing growth stocks: revisiting the nifty fifty. *AII Journal*, 24(2), 8-20. Retrieved from <http://csinvesting.org/wp-content/uploads/2015/03>
- Teweles, R., & Bradley, E. (1998). *The stock market (7th ed.)*. John Wiley & Sons.
- Upadhyaya, J. P. (2022). Internal control system in enhancing the corporate governance in listed insurance companies in Nepal. *Jurnal Ekobis: Ekonomi, Bisnis & Manajemen*, 12(2), 1-15. doi: <https://doi.org/10.37932/j.e.v12i2.596>
- Wagle, S. (2021). *Quest Journal of Management and Social Sciences* , 5 (1), 69-84. doi: <https://doi.org/10.18311/sdmimd/2021/27989>

## Appendices

### Appendix A

Share price and financial data of LICN

<b>Year</b>	<b>Company</b>	<b>Share price</b>	<b>EPS</b>	<b>Market to BVPS</b>	<b>ROE</b>	<b>P/E ratio</b>	<b>DPS</b>
2070-71	LICN	4,095.00	29.60	1.63	0.012	138.00	31.58
2071-72	LICN	2,799.00	29.11	1.11	0.012	96.00	26.32
2072-73	LICN	1,439.54	30.00	0.44	0.009	119.00	-
2073-74	LICN	2,151.00	10.70	0.81	0.004	201.03	19.87
2074-75	LICN	1,622.00	105.38	0.48	0.031	15.39	-
2075-76	LICN	1,600.00	19.85	6.94	0.086	80.60	10.71
2076-77	LICN	1,330.00	35.81	7.37	0.198	37.14	25.63
2077-78	LICN	2,342.00	33.70	11.73	0.169	69.50	9.09
2078-79	LICN	1,415.00	38.07	7.15	0.192	37.17	16.67
2079-80	LICN	1,555.00	28.40	6.90	0.126	54.75	-

*Source: NEPSE annual report and company's audited financial statements*

**Appendix B:**

Share price and financial data of ALICL

<b>Year</b>	<b>Company</b>	<b>Share price</b>	<b>EPS</b>	<b>Market to BVPS</b>	<b>ROE</b>	<b>P/E ratio</b>	<b>DPS</b>
2070-71	ALICL	1,250.00	14.41	1.24	0.0142	86.73787	30.00
2071-72	ALICL	1,013.00	4.66	1.01	0.0046	217.4457	0.00
2072-73	ALICL	376.58	15.80	0.29	0.0122	23.83411	21.05
2073-74	ALICL	1,458.00	8.31	9.95	0.0567	175.4513	0.00
2074-75	ALICL	683	7.27	3.93	0.0418	93.94773	16.67
2075-76	ALICL	383	15.26	2.98	0.1189	25.0983	37.50
2076-77	ALICL	260	13.38	1.84	0.0947	19.43199	0.00
2077-78	ALICL	1348	16.8	8.08	0.1007	80.2381	0.00
2078-79	ALICL	574	22.1	4.04	0.1554	25.97285	19.79
2079-80	ALICL	745.1	10.78	6.44	0.0932	69.11874	19.51

*Source: NEPSE annual report and company's audited financial statements*

### Appendix C

Share price and financial data of NLIC

<b>Year</b>	<b>Company</b>	<b>Share price</b>	<b>EPS</b>	<b>Market to BVPS</b>	<b>ROE</b>	<b>P/E ratio</b>	<b>DPS</b>
2070-71	NLIC	4,351.00	56.67	2.49	0.03	76.78	68.00
2071-72	NLIC	2,886.00	30.42	1.95	0.02	94.86	26.32
2072-73	NLIC	1,209.67	41.83	0.76	0.03	28.92	30.08
2073-74	NLIC	2,300.00	32.44	1.51	0.02	70.89	70.53
2074-75	NLIC	799	22.00	3.59	0.10	36.32	-
2075-76	NLIC	901	20.00	5.35	0.12	45.05	-
2076-77	NLIC	1260	15.00	9.79	0.12	84.00	23.66
2077-78	NLIC	1919	27.00	12.47	0.18	71.07	-
2078-79	NLIC	747	1.18	6.32	0.01	633.05	-
2079-80	NLIC	744	24.50	5.18	0.17	30.37	-

*Source: NEPSE annual report and company's audited financial statements*

### Appendix D

Share price and financial data of SLICL

<b>Year</b>	<b>Company</b>	<b>Share price</b>	<b>EPS</b>	<b>Market to BVPS</b>	<b>ROE</b>	<b>P/E ratio</b>	<b>DPS</b>
2070-71	SICL	940.00	59.22	3.55	0.2236	15.87	26.90
2071-72	SICL	690.00	99.19	1.91	0.2748	6.96	28.25
2072-73	SICL	660.32	138.48	1.03	0.2153	4.77	63.16
2073-74	SICL	1,070.00	162.60	1.34	0.2031	6.58	30.53
2074-75	SICL	985.00	180.34	1.00	0.1838	5.46	-
2075-76	SICL	771.00	181.30	0.66	0.1560	4.25	-
2076-77	SICL	1,019.00	28.39	0.68	0.0189	35.89	-
2077-78	SICL	1,952.00	18.15	1.12	0.0105	107.55	21.84
2078-79	SICL	807.00	14.47	0.38	0.0068	55.77	-
2079-80	SICL	845.00	8.52	0.38	0.0039	99.18	13.89

*Source: NEPSE annual report and company's audited financial statements*

### Appendix E

Share price and financial data of NLG

<b>Date</b>	<b>Company</b>	<b>Share price</b>	<b>EPS</b>	<b>Market to BVPS</b>	<b>ROE</b>	<b>P/E ratio</b>	<b>DPS</b>
2070-71	NLG	863.00	58.19	3.78	0.25	14.83	9.09
2071-72	NLG	559.00	44.74	2.34	0.19	12.49	13.04
2072-73	NLG	549.42	56.00	2.14	0.22	9.81	16.67
2073-74	NLG	1,485.00	45.09	5.97	0.18	32.94	20.00
2074-75	NLG	930.00	38.39	4.11	0.17	24.23	20.00
2075-76	NLG	762.00	31.61	2.91	0.12	24.11	-
2076-77	NLG	657.00	25.73	2.87	0.11	25.53	-
2077-78	NLG	1,220.00	14.66	5.13	0.06	83.22	6.54
2078-79	NLG	478.00	15.97	2.26	0.08	29.93	17.36
2079-80	NLG	840.00	14.26	4.10	0.07	58.91	9.09

*Source: NEPSE annual report and company's audited financial statements*

### Appendix F

Annual inflation rate, GDP rate and T-bill rate

<b>Date</b>	<b>Inflation</b>	<b>Real GDP %</b>	<b>T-bill rate</b>
2070-71	6.31%	3.98%	2.26%
2071-72	7.82%	0.43%	1.20%
2072-73	6.26%	8.98%	0.22%
2073-74	3.60%	7.62%	1.77%
2074-75	6.15%	6.66%	1.57%
2075-76	4.64%	2.37%	4.38%
2076-77	4.15%	4.84%	3.74%
2077-78	4.45%	5.61%	4.50%
2078-79	9.93%	1.86%	10.07%
2079-80	7.21%	4.50%	9.08%

*Source: NRB Monetary Policy and reports, [www.statista.com](http://www.statista.com), [nrb.org.np](http://nrb.org.np), [macrotrends.net](http://macrotrends.net)*

## Appendix G

### Regression Analysis Calculation Sheet

<i>Summary Output</i>	
<i>Regression Statistics</i>	
Multiple R	0.726470394
R Square	0.527759233
Adjusted R Square	0.435614693
Standard Error	642.4778922
Observations	50

### ANOVA

	<i>df</i>	<i>F</i>	<i>Significance F</i>
Regression	8	5.7275	0.000066
Residual	41		
Total	49		

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	1,549.59	561.68	2.75	0.00863
EPS	7.93	3.071	2.58	0.01343
Market to BVPS	179.73	45.98	3.90	0.00034
ROE	(8,728.42)	1,922.48	(4.54)	0.00005
P/E ratio	(0.84921)	1.24	(0.68)	0.49839
DPS	21.48540	5.61	3.82	0.00043
Inflation	1,500.99	6,919.99	0.21	0.82936
GDP	(9,125.30)	4,335.33	(2.10)	0.04148
Interest rate	(7,940.07)	3,919.49	(2.02)	0.04933

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i ii ABSTRACTS The objective of the study is to determine the stock price behavior of listed insurance companies in Nepal based on firm specific financial indicators and macroeconomic variables such as EPS, return on equity, dividend payout, market to book value and PE and inflation rate, GDP rate, interest rate as independent variables. Out of 12 listed life and non-life insurance companies, three life and 2 non-life listed companies have been selected for the fiscal year 2070/71 to 2079/80. The study applies descriptive and casual comparative research design focusing on purposive sampling model. Financial tool and statistical tools are used as research methodology to find the result showing the relationship between the dependent variable (stock price per share) and independent variables that are financial and macroeconomic indicators. The CAPM analysis shows ALIC to be underpriced. The correlation results shows that MPS have positive or negative relationship with many of the variables selected as well as relationship amongst the variables. MPS have negative relationship with ROE, EPS, inflation, interest rate and GDP while it shows statistically significant positive relationship with dividend per share. Furthermore, the regression model explains that the adjusted R-squared value is significant which cumulatively explained major portion of variation arising due to predictors. It also shows the fitness of applying the model for analysis with the F-significance value which is significantly. This means that the model represents to be fairly fitted model. The results of