MACROECONOMICS INDICATORS AND STOCK MARKET DEVELOPMENT IN NEPAL

A Dissertation submitted to the Office of the Dean, Faculty of Management in partial fulfillment of the requirements for the Degree of Masters of Business Studies

By

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CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled "**Macroeconomics Indicators and Stock Market Development in Nepal**". The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor. It has been proposed and presented as part of requirements for any other academic purposes.

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

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REPORT OF RESEARCH COMMITTEE

Mr. Nabin Bhandari has defended research proposal entitled "**Macroeconomics Indicators and Stock Market Development 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. Dinesh Basnet and submit the thesis for evaluation and viva voce examination.

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APPROVAL SHEET

We, the undersigned, have examined the thesis entitled "**Macroeconomics Indicators and Stock Market Development in Nepal**" presented by Nabin Bhandari a candidate for the degree of Master of Business Studies (MBS Semester) and conducted the viva voce examination of the candidate. We hereby certify that the thesis is worthy of acceptance.

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This study entitled "**Macroeconomics Indicators and Stock Market Development in Nepal**" has been prepared in partial fulfillment for the Degree of Master of Business Studies (MBS) under the Faculty of Management, Tribhuvan University is based on research models involving the stock market and macroeconomics indicators in Nepal.

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Nabin Bhandari
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ABBREVIATIONS

B.S	:	Bikram Sambat
DPS	:	Dividend Per share
EPS	:	Earning Per Share
FY	:	Fiscal Year
Ke	:	Cost of equity capital
LTD	:	Long Term Debt
MVPS	:	Market value per share
NRB	:	Nepal Rastra Bank
NW	:	Net wrth
PE	:	Price earning
Po	:	Value of stock today
ROA	:	Return on Assets
ROE	:	Return on Equity
S.D	:	Standard Divination
SEBON	:	Security Board of Nepal
TA	:	Total Assets
TU	:	Tribhuvan University

ABSTRACT

The stock index, inflation, and interest rate are the main macroeconomic factors that have a major impact on a country's economic growth. Interest rate and inflation changes on stock indexes have a big impact on government financial market policy, risk management practices, and surveillance systems. Interest rates, GDP and inflation are three of the most important economic factors affecting common stock prices. This study examines relationship between interest rate, inflation rate, GDP and NEPSE index specifically and to analyze the impact of interest rate, inflation rate, GDP on NEPSE index individually and jointly. Both descriptive and causal comparative research design has been used in this study. Purposive sampling method was utilized in the study to choose the data from the sample. Secondary sources were used to acquire the data for this investigation. The gathered facts are thematically and logically evaluated and interpreted. This study shows the data of fourteen years from 2010/11 to fiscal year 2023/24.

The result of correlation analysis shows there is high degree of positive and significant relationship between GDP and NEPSE while high degree of negative and significant relationship of inflation rate and interest rate with NEPSE. Similarly, the regression result shows that GDP shows positive and statistically significant impact in NEPSE while inflation rate and interest rate shows negative and insignificant impact on NEPSE.

Key Words: *GDP, Interest Rate, Inflation Rate, NEPSE*

CHAPTER I
INTRODUCTION

1.1 Background of the Study

The primary macroeconomic variables that significantly affect a nation's economic growth are the stock index, inflation, and interest rates. Government financial market policy, risk management procedures, and surveillance systems are significantly impacted by changes in interest rates and inflation on stock indexes. Two of the most significant economic variables influencing the price of common stocks are interest rates and inflation. Interest rates have a direct effect on the financial market; as rates rise, investment choices often shift from capital market to fixed income assets (Hedau, 2024).

The money market is directly influenced by changes in GDP, inflation, and interest rates. Stocks are sensitive to fluctuations in inflation and interest rates because they have a negative correlation with equities (Cassel, 1918). Historical and current empirical research have looked at a wide range of macroeconomic issues that affect stock indices. Although this is crucial, investors need to understand that various economic sectors react differently to shifts in macroeconomic factors. Most previous studies only examined the stock market as a whole, ignoring how these factors affected other economic sectors (Amanda, 2023).

A precise association between the interest rate, GDP, and inflation rate and the stock prices of the banking industry cannot be established until an empirical analysis is carried out. Thus, this study attempts to elucidate the current relationship between the interest rate, inflation rate, and stock index using empirical data. Interest rates are one of the main macroeconomic variables that directly affect economic growth. Generally speaking, interest rates are considered the cost of capital, or the price paid to use funds for a given period of time. From the borrower's point of view, interest rates are the cost of borrowing money (borrowing rate). The interest rate is the cost of lending money from the lender's point of view. Astute investors always look to invest in markets that are efficient. Because few people may make significant profits in an inefficient market, the public's trust in the system is weakened (Shrestha & Subedi, 2014).

In these circumstances, if the interest rate that banks provide to depositors increases, people transfer their funds from the share market to banks. Because of this, there will be less demand for shares, which will also result in lower share prices. On the other hand, when banks pay depositors higher interest rates, the lending interest rate also rises, which leads to a decrease in economic investments and, ultimately, a drop in share price (Laichena & Obwogi, 2015). Theoretically, then, the share price and interest rate have an inverse connection. Tighter monetary policy-induced increases in interest rates usually have a negative effect on stock market performance. This is due to the fact that rising interest rates, as demonstrated by the dividend discount model, reduce the value of stocks and, consequently, make fixed income instruments more attractive as alternatives to stocks. As a result, investors may be less inclined to take out loans and purchase equities. Additionally, it raises running costs, which affects the profit margin. But the stock market also benefits from reduced interest rates brought about by the expansionary monetary policy (Farras, 2021).

Another factor that affects the stock index is the rate of inflation. Inflation is defined as a general and gradual increase in prices, which causes everything to increase in value except money. Inflation is defined as a decrease in the value of money, and the price change represented by the monthly or annual price index is known as the inflation rate (Karki, 2018). The rate of inflation measures the annual percentage increase in prices, with the retail price being the most commonly used metric. The government releases a consumer price index each month, and the percentage increase in that index over the previous 12 months is known as the inflation rate.

An increase in inflation is bad for the economy. It should be lower. The performance of the stock market is also negatively impacted by a significant increase in inflation. Investors regard rising inflation adversely since it signals poor national economic conditions and makes them apprehensive about their stock market investments. They expect the Fed to implement strict monetary policy in the future to curb inflation, which in turn regulates the money supply. Because borrowing has tougher restrictions and greater fees, firms find it more difficult to secure bank funding. The economy is perceived as performing well and investors are attracted to the stock market when the rate of inflation decreases (Shrestha & Subedi, 2014).

Investigating the effects of interest rates, GDP, and inflation on the stock market is the aim of this study. This study examines whether shifts in GDP, inflation, and interest rates affect the performance of the stock market.

The economy as a whole is impacted by the performance of the stock market, and empirical evidence has demonstrated that economic growth depends on the growth of the capital market. During this period, the country's exposure to the outside world is most apparent. There has always been debate over the relationship between the economy and stock price (Malkiel, 1989). The pricing implications have been highlighted by Markowitz's seminal work, the mean-variance portfolio theory. Since then, scholars and practitioners have closely monitored stock price volatility since it can be used as a gauge of risk in financial markets. Establishing an empirical connection between volatility and macroeconomic indicators has proven to be very challenging. Some studies have found strong evidence to support the notion that stock volatility increases during recessions. Price volatility seems to be patternless and unrelated to economic factors. In some circumstances, it is closely related to macroeconomic factors, but in others, macroeconomic factors might not have an impact on volatility. In the body of existing literature, there are numerous signs of the relationship between macroeconomic conditions and stock prices.

Studies have indicated a relationship between some macroeconomic factors and stock prices, however most of these studies were conducted in industrialized nations. However, macroeconomic considerations could not be reliable indicators of changes in stock market prices in less developed countries, including those in Asia, because stock markets are unable to appropriately assimilate information about shifts in macroeconomic fundamentals (Hanitha, 2024). Whether research on industrialized economies is still applicable to smaller, developing, or undeveloped capital markets is too soon to say.

Stock markets are becoming more and more significant as financial channels for saving and investing in the Nepalese economy. In general, the stock market is less volatile than in other emerging countries. The main reason for the low volume of equity trading is the lack of demand. However, pricing volatility has increased recently due to the increase in trading volume caused by investors' speculative objectives. Therefore, macroeconomic stability is now essential to the country's economic growth and financial development.

Given these realities, it is imperative to investigate the extent to which macroeconomic factors impact the Nepali stock market (Shrestha, 2019).

Investors and policymakers alike need to be aware of the complex interplay between macroeconomic conditions and the stock market. Macroeconomic variables have a big influence on stock prices because of Nepal's growing economy and stock market. Market dynamics are significantly impacted by a number of variables, including GDP growth, inflation, interest rates, currency exchange rates, and governmental policies. For example, while quick inflation could reduce purchasing power and lower investor sentiment, rapid GDP growth could increase stock prices and market confidence. Exchange rate fluctuations can also affect how competitive imports and exports are, which can affect businesses that are listed on stock exchanges (Alzoubi, 2022).

Furthermore, market dynamics are significantly impacted by the monetary policies that the nation's central bank, Nepal Rastra Bank, implements. Decisions about interest rates affect the cost of borrowing for companies, which in turn affects their profitability and, eventually, stock prices. Fiscal policies can also have a direct effect on economic activity and investment behavior. These policies include those pertaining to taxes and spending by the government. For investors to make wise choices and for policymakers to create workable plans to promote sustained economic growth, it is crucial to comprehend the intricate relationships that exist between various macroeconomic factors. To learn more about how macroeconomic concerns affect Nepal's stock market, read scholarly research, financial institution reports, and analysis from respectable think tanks. These resources provide insightful viewpoints and reliable data, empowering users to confidently negotiate the intricacies of the Nepalese market environment (Parab, 2020).

As a result, the study concentrates on the macroeconomic elements that significantly impact stock market performance, especially in developing nations like Nepal. There is a complex and ever-changing relationship between stock prices and factors including GDP growth, inflation, interest rates, exchange rates, and governmental policies. Strong GDP growth has the potential to raise stock prices and market confidence, but high inflation rates can also reduce investor mood and purchasing power. Furthermore, interest rate decisions made by organizations such as the Nepal Rastra Bank directly affect the cost of borrowing for businesses, which in turn affects their profitability and, ultimately, stock

prices. Together with other fiscal policies, government taxation and spending have an effect on investment trends and the state of the economy as a whole. For policymakers to develop successful plans for sustained economic growth and for investors to make wise choices, it is essential to comprehend these intricate interdependencies. To have a better understanding of how macroeconomic issues impact the dynamics of Nepal's stock market, more research through scholarly studies, financial reports, and analyses is needed.

1.2 Problem Statement

Finding out how different interest rates and the rate of inflation impact the stock index is the aim of this study. The stock index gives us an idea of the overall health of the economy. Exchange rates, GDP, money supply, monetary and exchange rate policies, and political news and rumors are just a few of the many factors that impact stock market performance. However, an interest rate and an inflation rate have been chosen for this investigation. Interest rates and inflation rates are expected to have a greater impact on the stock index. As a result, an expansionary monetary policy that raises inflation and lowers interest rates may increase economic activity and raise the stock market index. Investors, policymakers, and financial economists have long been interested in how interest rates and inflation affect stock indexes. To ascertain the nature and magnitude of the dynamic interactions between high interest rates and inflation, empirical evaluation is required as the specific patterns of these interactions remain unclear (Amanda, 2023).

Hedau (2024) examined the relationships between the money supply, exchange rates, treasury bill rates, wholesale price index, industrial production index, and the NIFTY 50 index of the Indian stock market. Naik and Padhi claim that whereas the money supply and industrial production are positively correlated, inflation and stock prices are negatively correlated. The exchange rate and short-term interest rates were shown to have minimal impact on stock values.

Barasa (2014) investigated the elements influencing the performance of the stock market on the stock exchange. According to the customer price index, Barasa revealed no statistically significant relationship between inflation and stock market performance. The study concluded that the performance of the stock market and inflation did not significantly and negatively correlate. An empirical study on the macroeconomic factors influencing Nepal's stock market performance was carried out by Karki (2018). Four

macroeconomic variables are taken into account: the broad money supply, interest rates, inflation, and real GDP. Haider (2018) computes these variables using annual statistics. According to research, real GDP, inflation, and the money supply all have a positive impact on stock market performance, but interest rates have a negative one. More importantly, there is no long-term evidence that macroeconomic factors influence the stock market index, suggesting that macroeconomic factors do not explain variations in Nepali stock values. This supports the random walk hypothesis for the Nepalese stock market.

Khatri (2019) looked into the dynamic relationship between the stock market and macroeconomic factors such the gross domestic product, inflation, money supply, interest rates, and foreign direct investment in Nepal. There was a substantial and positive correlation between the money supply and stock prices. There is a weak and negative correlation between stock valuations and interest rates and actual economic activity. Similarly, there is a slight positive correlation between the Nepalese stock market and the US dollar exchange rate, inflation, and foreign direct investment.

A 2019 study by Shrestha and Pokhrel examined the factors affecting the Nepali stock index. Empirical results show that while interest rates have a negative effect on the Nepal stock index, the growth of broad money has a positive effect. It was demonstrated that the stock index is supported by low interest rates and easily accessible funds. The stock index is positively correlated with inflation and negatively correlated with broad money and interest rates. More importantly, the stock index has been found to respond substantially to changes in the political environment, adjustments to Nepal Rastra Bank's share collateral lending policy, and, to a lesser extent, increases in paid-up capital. Even so, the models are unable to account for a sizable amount of the share index's volatility, underscoring the importance of news, speculation, and rumors. The macroeconomic factors influencing Nepal's stock market prices were examined by Panta (2020). The outcome shows that the broad money supply, interest rates, inflation, and exchange rates are all highly correlated with the long-term fluctuations of the NEPSE Index. In the near term, the GDP, money supply, and exchange rate can all be positively defined; in the long term, only the money supply has a positive link.

Thus, based on the discussion above, the study's goal is to determine the dynamic link between interest rates, GDP, inflation rates, and stock indexes in order to determine how changes in these variables affect stock indexes.

i. What is the trend of interest rate, inflation rate, GDP and NEPSE index over the period?
ii. Is there any relationship between interest rate, inflation rate, GDP and NEPSE index?
iii. Is there any effect of interest rate, inflation rate, GDP on NEPSE index?

1.3 Objectives of the Study

Analyzing the relationship between interest rates, inflation rates, GDP, and NEPSE is the study's main goal. The particular goals of the research are;

i. To assess the trend of interest rate, inflation rate, GDP and NEPSE index.
ii. To examine the relationship between interest rate, inflation rate, GDP and NEPSE index.
iii. To analyze the effect of interest rate, inflation rate, GDP on NEPSE index individually and jointly.

1.4 Research Hypothesis

In this study, NEPSE is the dependent variable, and interest rates, GDP, and inflation are used as independent factors. Each of these elements is expected to have a significant impact on the stock price.

H1: There is significant impact of interest rate on NEPSE index.

H2: There is significant impact of inflation rate on NEPSE index.

H3: There is significant impact of GDP on NEPSE index.

1.5 Rationale of the Study

This study examines whether the stock index is impacted by changes in Nepal's GDP, inflation rate, and interest rate. Current and prospective investors will discover whether and how changes in GDP, inflation, and interest rates affect market investment and stock index return. It will assist local businesses in determining if listing on the stock index would be the best course of action, as well as assist investors in making informed investment decisions. To attract investors to the stock index, Nepalese authorities may

better plan and forecast how their policies will impact the market by understanding how GDP, interest rates, and inflation rates impact the index.

Therefore, understanding how Nepal's interest rate, GDP, and inflation rate relate to the stock market will help both foreign and indigenous investors manage their portfolios and make informed investment decisions. It is not only a useful source of information, but it may also pique interest in further study on this or related subjects including the behavior of both international and domestic investors.

1.6 Limitations of the Study

The study has following limitations:

i. Secondary sources of data, such as Nepal Rastra Bank's annual reports, government publications, and other relevant periodicals, served as the foundation for this investigation. As a result, the information supplied by the concerned offices determines the analysis's outcome.
ii. The study covers only the latest fourteen fiscal years (2010/11 to 2023/24).
iii. The study covers the interest rate, inflation rate, GDP and its impact on NEPSE index while others aspect are not include which may affect some extent in our result.

CHAPTER II

LITERETURE REVIEW

The Nepalese Stock Exchange (NEPSE) is greatly impacted by changes in GDP because a strong economy usually results in better stock prices and more investor confidence. Interest rate swings can have a significant impact; while higher rates may cause investors to look for safer options, lower rates typically stimulate investing in stocks rather than fixed-income products. Inflation rates also impact NEPSE by altering consumer spending power and the total cost of doing business. Both firm earnings and stock market performance are impacted by this. The hypotheses that numerous researchers in the field have produced in regard to this research are covered in the first section of chapter three. The empirical reviews from various publications and published pieces come next. In the end, the study's ending phase revealed the research gap between this study and previous studies.

2.1 Theoretical Review

There are several hypotheses on how inflation and interest rates affect stock indices. In order to address the price relationship of products with the value of various currencies, Cassel (1918) established the purchasing power parity theory, commonly known as the inflation theory of exchange rates. The Fisher effect theory states that nominal interest rates in two or more countries should be equal to the real rate of return that investors need plus a factor for the expected rate of inflation in each country (Fisher, 1930). According to the concept of liquidity preference, people's reluctance to relinquish their liquid control over their money is gauged by the interest rate at any particular time, which is the price for doing so. The market price that accurately reflects all available information is what Fama (1970) refers to as an efficient market. The efficient market hypothesis (EMH) states that financial markets are "informational efficient." Arbitrage pricing theory (APT) is a multi-factor asset pricing model that is based on the idea that returns on an asset may be predicted by using the linear relationship between the asset's expected return and a number of macroeconomic variables that indicate systematic risk. The random walk theory states that a stock's or the market's overall price movement cannot be predicted from its past movement or direction. It is the occurrence of an event that is dictated by a series of random movements; unpredictable happenings. The details of this theory are outlined below.

Purchasing Power Parity Theory

Exchange rate theory is based on purchasing power parity (PPP), also referred to as the inflation theory of exchange rates. Although PPP has roots in sixteenth-century Spain and early seventeenth-century England, the theory was first named PPP by a Swedish economist (Cassel, 1918). "Without it, there would be no meaningful way to discuss whether a currency is valued too high or too cheap," Cassel once said. The relationship between the prices of goods and the values of different currencies was the focus of the first introduction of absolute PPP theory. The theory requires strong conditions to function. Generally speaking, Absolute PPP is based on the implicit premise of a risk-neutral environment in which goods can be freely exchanged in a connected and competitive product market free from export quotas, taxes, transportation costs, and other limitations. However, in a real society, it is not possible to assume that there are no costs involved in transferring things from one place to another. In the actual world, every economy produces and consumes tens of thousands of goods and services, many of which have varying prices between countries as a result of trade restrictions, taxes, and transportation costs. The majority of individuals believe that absolute PPP is necessary for the products market to be in equilibrium. Absolute PPP creates a single market by combining the home and foreign markets. This hypothesis was only regarded as partial and not broad because it ignored money markets and the balance of foreign payments. Significant, long-lasting deviations from absolute PPP have been seen, possibly because of its many, strict, and unrealistic preconditions, which make it incapable to effectively explain real-world occurrences.

Fisher Effect Theory

The Fisher effect theory states that nominal interest rates in two or more countries should be equal to the real rate of return that investors need plus a buffer against the expected rate of inflation in each country (Fisher, 1930). That is the relationship between interest rates and fluctuations in exchange rates. It suggested that the projected nominal return on common stocks would consist of a "real" return plus one anticipated rate of inflation. Stock returns and anticipated, adjusted, and unexpected inflation have been shown to be negatively correlated by empirical research findings. Their explanation of the generalized Fisher effect states that, if the market is efficient and reflects all available information at time t-1, it will set the price of common stocks so that the expected nominal return from t-1 to t is equal to the sum of the appropriate equilibrium expected real rate and the

market's estimate of the expected inflation rate for the same time period. When inflation is expected to rise sharply, investors move from financial assets to real assets. According to this idea, stocks serve as inflation hedges since they are claims on real assets. It also implies that anticipated inflation and stock price appreciation are positively connected with rising stock prices.

Liquidity Preference Theory

Liquidity preference theory states that people's reluctance to relinquish their liquid control over money is measured by the interest rate at any particular time, which is the price for doing so. The cost that strikes a balance between the quantity of cash that is easily accessible and the desire to hold wealth in the form of cash is the interest rate. People need money for many reasons, such as funding planned expenses, forecasting interest rate movements, or just not knowing what the future will bring and thus wanting to keep some of their resources in the form of pure purchasing power (Keynes, 1936). These justifications for requesting funds became known as transactional, speculative, and preventative justifications. However, one of the most significant independent variables in the money supply domain is determined by the central bank's operations. Consequently, liquidity preference was regarded as the desire for money in most Keynesian literature, and liquidity preference theory as the notion that interest rates are influenced by the supply and demand of money. This constrictive application of liquidity preference theory, however, is controversial. Another way to think about it is as an asset choice theory. As Keynes pointed out in his argument with Ohlin, liquidity preference was essentially a theory of choice between keeping money idle and holding loans, with the interest rate acting as a counterbalance to the advantages of each option.

Efficient Market Hypothesis (EMH)

The market price that accurately reflects all available information is what Fama (1970) refers to as an efficient market. The efficient-market hypothesis (EMH) states that financial markets are "informational efficient". In other words, it is impossible to consistently produce returns that are higher than average market returns on a risk-adjusted basis using the information that was available to the general public at the time of the investment. It is also important to keep in mind that, up until now, the usual approach in empirical research has been to infer market efficiency from the seeming independence of

subsequent price fluctuations. There has not been much actual testing to find out how quickly prices react to different kinds of new information.

Arbitrage Pricing Model

The arbitrage pricing model basically looks at the risk premium that is distributed among different factors that affect asset returns to see how important those returns are or if they are "priced" into stock market returns. As a result, it led us all to believe that there is, in reality, a long-standing equilibrium between macroeconomic factors and stock prices. This resulted from evidence that the economy's dynamics affected discount rates and companies' capacity to pay dividends and future cash flows (Ross, 1976).

Random Walk Theory

The price of a stock or the market as a whole cannot be predicted by its historical movement or direction, according to Malkiel (1989). It is the occurrence of an event that is dictated by a series of random movements; unpredictable happenings. For example, when drunk people are impaired and their walk does not follow a predictable pattern, their gait can be considered random. Applying the random walk theory to stocks suggests that since they change randomly, it is impossible to predict their prices.

2.2 Empirical Review

Hanitha (2024) investigated a study on co-integration analysis of macro-economic factors, index ftse, on the Indonesian stock exchange period 2017-2022. In addition to analyzing and comprehending the evolution of the worldwide exchange stock price, the FTSE index was examined in relation to the Indonesian Stock Exchange (BEI) in order to determine co-integration between the FTSE 100 and data on inflation, interest rates, and USD/IDR exchange rates. joined IHSG. Quantitative research techniques were applied in this investigation. Monthly data collection was conducted for five years, starting in 2017 and concluding in 2022. This sampling technique makes use of a nonprobability sampling strategy called purposeful sampling. The analysis was carried out using the VECM test and the Johansen co-integration test with E-views 10 software. The findings of the Granger causality test show that the FTSE 100, inflation, interest rates, the USD/IDR exchange rates, and the composite stock price index (IHSG) do not significantly correlate over the short run. According to the Trace Test Critical Value > 0.05, a number of research variables exhibit co-integration, or a long-term relationship. The Maximum

Eigenvalue then contains four Max-Eigen Statistics values > Critical Value = 0.05. These results support the maximum eigenvalue test and the trace test's conclusion that there is long-term co-integration between the study variables. The FTSE, inflation, interest rates, and currency rates can all explain 88.16% of the fluctuation proportion, according to the short-term R-squared value of 0.881618. The remaining 11.84% may be explained by additional factors not taken into consideration in the estimated model.

Hedau (2024) assess a study on impact of macroeconomic variables on the performance of the Indian stock market. The macroeconomic factors influencing the performance of the Indian stock market's NIFTY 50 index are investigated in this study. The study is unique since it bases its conclusion on both primary and secondary data. The NIFTY 50 index's monthly performance is first regressed against monthly data of macroeconomic indicators over a nine-year period using logistic regression. The results of the regression analysis are validated in the second stage using primary data gathered from in-person interviews with stock market specialists. The analysis of secondary data confirms that the Dow Jones index and fluctuations in exchange rates are the main drivers of the NIFTY 50 index. However, experts think that other factors including political stability, the status of the developed world economy, and India's bilateral relations with other countries must also be taken into account when forecasting the movement of the NIFTY 50 index.

Amanda et al. (2023) examined a study on the effect of inflation, exchange, interest rate on stock price in the transportation sub-sector, 2018-2020. This analysis looks into how stock prices in the transportation subsector will be impacted by inflation, interest rates, and currency rates between 2018 and 2020. Quantitative methods were used to examine the data. Statistics published by Bank Indonesia and secondary data from the website id.investing.com were used. The study's sample consisted of eleven transportation firms that were listed on the IDX between 2018 and 2020. The sample technique used was called purposeful sampling. The data analysis method employed in this study is the panel data regression analysis strategy. The study found that inflation, interest rates, and currency rates have a positive and significant impact on the dependent variable, which is the stock prices of transportation companies listed on the IDX between 2018 and 2020.

Hanuransyah (2023) examined a study on the analysis of inflation, exchange rate, and benchmark interest rate (BI rate) influences on the Indonesia composite index (ICI). One

of the main objectives of the study was to investigate the relationship between Bank Indonesia, the Indonesia composite index (ICI), and the USD/IDR exchange rate in Indonesia from 2001 to 2021. A quantitative approach to explanatory analysis was employed in this kind of study. Data for the study is provided by Bank Indonesia (BI), the Indonesia Stock Exchange (IDX), and the Central Statistics Agency (BPS). The US dollar to rupiah exchange rate (KURS), inflation, benchmark interest rate, and ICI for the time period are the sources of these secondary statistics. Multiple linear regression models and ordinary least squares (OLS) were used in this study's analysis methodology. The results showed that the interest rate determined by the Ordinary Least Square (OLS) of the Composite IDX is dependent on the overall movement of exchange rates.

Alzoubi (2022) examined a study on stock market performance: Reaction to interest rates and inflation rates. This study looks at how wealth affects the consumer price index, interest rates, domestic lending, and actual economic activity on the Amman Stock Exchange. From 1991 until 2020, the autoregressive distributed lag (ARDL) bounds test was used. Interest rates can hurt investors even though they are a useful monetary tool for battling inflation and recession. The target variables, the interest rate (IDR) and the consumer price index (CPI), are both highly significant and have the appropriate indicators. The results show that every variable—aside from domestic credit as a percentage of GDP—is important. Both the consumer price index (CPI) and the interest rate (IDR) are quite important and have the proper indicators.

Farras (2021) conducted research on the effects of exchange rates, inflation, and interest rates on the performance of banking companies between 2017 and 2020. The purpose of this study is to look into how banking institutions' performance is related to inflation, interest rates, and currency rates between 2017 and 2020. Due in part to the reduction in the trade deficit from the previous year and the surplus in capital and financial trade, Indonesia enjoyed a surplus in its balance of payments when the global COVID-19 epidemic struck in 2020. The purpose of this study was to use statistical analysis to evaluate a hypothesis about how variable X affects variable Y. The aspects that were studied, such as the company's performance development as represented by its stock price, would be explained using the descriptive technique. In the meantime, by analyzing hypotheses, the verification procedure established a theory if it was indisputable. In the data analysis, the unit cross section at various times was determined using data panel

regression, which combines data cross and data time series. The performance of banking firms was influenced by exchange rates, even though the different effects of GDP, inflation, and interest rates were not apparent in the latter. These results indicate that, aside from exchange rates, companies in the banking industry are comparatively resistant to macroeconomic variables. This is due to the fact that the majority of banking-related businesses conduct their transactions in foreign currencies, particularly the US dollar, rather than Rupiah.

Suhadak (2021) investigated on the influence of exchange rates on inflation, interest rates and the composite stock price index: Indonesia 2015 – 2018. The main objective of the study is to examine the effects of exchange rates on interest rates, inflation, and the composite stock price index. This study offers explanations through a quantitative approach. The secondary data used came from the Bank of Indonesia and the Indonesia Stock Exchange. For its investigation, this study used a saturated sample. To evaluate the data, this study used descriptive statistics, path analysis, linear regression, and traditional assumption testing. According to the study's findings, the composite stock price index is positively but marginally impacted by the exchange rate, inflation, and interest rate; the interest rate is positively but significantly impacted by inflation; the exchange rate has a negative but significant impact on inflation; and the interest rate has a positive but significant impact on inflation.

Parab (2020) analyzed a study on the dynamics of macroeconomic variables in Indian stock market: a Bai–Perron approach. The Bai–Perron test is used to solve the problem and examine the effect of a few selected macroeconomic variables on stock market returns. In order to solve this problem, the study looks at the effects of specific macroeconomic factors on stock market returns before looking at the causal relationships. The analysis's findings showed that macroeconomic variables had a considerable impact on stock market returns, with these effects varying between structural periods. The findings are intended to significantly advance the field of finance literature while also assisting market participants and research analysts in their assessment of the Indian stock market.

Ilhan (2020) examined a study on the impact of macroeconomic variables on the stock market in the time of covid-19: the case of turkey. The main objective of the study is to

examine the effects of the COVID-19 pandemic on economies using a range of forecasts and simulations. Thus, from September 13, 2019, to September 11, 2020, the effects of interest rates, exchange rates, CDS premiums, VIX, and oil prices on BIST 100 are assessed using the flexible least squares approach, which allows for the time-varying coefficient estimate. Empirical data indicates that the interest rate, VIX, and oil prices had a major influence on the BIST 100 over particular time periods. On the other hand, the exchange rate and CDS premium significantly hurt BIST 100 over the course of the entire sample. Additionally, the exchange rate is the macroeconomic variable that has the most impact on BIST 100, according to the quantitative magnitude of the coefficients.

Emenyi (2020) explored on macroeconomic variables and stock market performance: Covid – vectors or Covid - variables? This study examined how macroeconomic variables affected the performance of the Nigerian stock market during the 2020 COVID-19 lockout. Both the ex post facto research method and a descriptive research design were used in the study. Secondary data from the financial reports of the non-financial companies under investigation that were listed on the Nigerian Stock Market served as its foundation. This analysis used daily data from August 20, 2020, to February 20, 2020. The Central Bank of Nigeria (CBN) and the National Bureau of Statistics (NBS) provided the data. The study's conclusions demonstrate that while exchange rates significantly impacted stock market performance during the Corona virus lockdown period, the money supply had no appreciable effect on the stock market performance of nonfinancial firms during the period under investigation. The study's findings will contribute to the theoretical and practical knowledge base about the macroeconomic factors affecting stock market performance.

Khan (2019) studied on impact of exchange rate on stock returns in Shenzhen stock exchange: analysis through ARDL approach. In order to investigate the short- and long-term links between the research variables and the impact of the exchange rate on the stock returns of the Shenzhen stock exchange between January 2008 and December 2018, this study used the ARDL model. The exchange rate has a substantial and adverse impact on the stock returns of the Shenzhen stock exchange, as indicated by the anticipated ARDL outcomes. The findings indicate that inflation and interest rates have a statistically significant detrimental effect on stock returns. According to the study's anticipated

conclusions, central bank authorities ought to take actions that support exchange rate stabilization.

Mgammal (2018) researched on the effect of inflation, interest rates and exchange rates on stock prices comparative study among two GCC countries. Determining the relationship between exchange rates and stock prices is the main objective of this article. The United Arab Emirates (UAE) and the Kingdom of Saudi Arabia (KSA), two Gulf nations, are the subjects of the study, which uses quarterly and monthly data from January 2008 to December 2009. The short-term results of the study show that the exchange rate has a positive impact on the stock market price index for the United Arab Emirates and no correlation with the stock market price index for the Kingdom of Saudi Arabia. Additionally, the long-term analysis found that the exchange rate has a negative effect on the index of stock market prices in the United Arab Emirates. However, there is no relationship between these traits in Kingdom Saudi Arabia.

Haider (2018) studied on impact of interest rate, inflation rate, exchange rate and gold prices on Karachi Meezan Index 30. The goal of this study is to determine how macroeconomic and financial factors affect Pakistan's first Islamic stock index, the Karachi Meezan Index 30. This study uses monthly data on the variables KMI Index 30, Interest rate, Inflation rate, Exchange rate, and Gold price from July 2011 to June 2016. It uses a Multiple Regression Model to determine the impact of chosen variables on KMI 30. The empirical finding demonstrates that the KMI 30 Index has a negative association with interest rates and gold prices, while the exchange rate and the KMI 30 Index have a positive relationship. Our regression model indicates that there is no meaningful association between the inflation rate and the KMI 30 Index. The empirical finding demonstrates that the KMI 30 Index has a negative association with interest rates and gold prices, while the exchange rate and the KMI 30 Index have a positive relationship. Our regression model indicates that there is no meaningful association between the inflation rate and the KMI 30 Index.

Yunita (2018) analyzed a study on the influence of inflation rate, bi rate, and exchange rate changes to the financial sector stock price index return in the Indonesian stock market. The purpose of this study is to ascertain how macroeconomic factors, such as shifts in the exchange rate, BI rate, and inflation rate, affected the banking sector stock

price index in IDX between 2011 and 2017. This study employed Generalize Autoregressive Conditional Heteroscedasticity (GARCH) as its analysis method to determine the optimal model. The results show that exchange rate fluctuation is the only factor that has a substantial impact on the financial sector stock price index. Neither the BI rate nor inflation have a major effect on the banking sector stock price index.

Balagobei (2017) examined a study on macroeconomic variables and stock market returns in Sri Lanka. This study aims to investigate the effects of macroeconomic factors on the performance of the Sri Lankan stock market. The dependent variable in this study is the stock market return, which is measured by the all share price index (ASPI) and all share total return index (ASTRI). Money supply (MS), interest rate (IR), inflation rate (INF), exchange rate (ER), and factory industry production index (FIPI) are the independent variables. All companies that were listed and traded on the Colombo stock exchange (CSE) between 2006 and 2015 are the subject of the study. The Department of Census and Statistics' annual reports, the Colombo stock exchange, the Securities and Exchange Commission, and the central bank of Sri Lanka were the sources of secondary data used in the analysis. The results of the study demonstrate that macroeconomic factors influence stock market performance, with the exception of Sri Lanka's money supply. The return on the Colombo stock market is negatively impacted by factory production and interest rates. Both inflation and exchange rates have a favorable effect on stock market returns.

Jamaludin (2017) studied on macroeconomic variables and stock market returns: panel analysis from selected ASEAN countries. This article aims to examine the effects of three important ASEAN nations on returns from both conventional and Islamic stock markets: inflation, money supply (MS), and exchange rate (ER). (Malaysia, Indonesia, Singapore). The results, which were obtained using panel least square regression techniques, show that both the inflation rate and ER significantly affect the performance of the stock market. MS is shown to be insignificant. The results of this study also show that inflation is negatively connected with stock market performance and has a greater effect. In this case, monetary policy must be adjusted to ensure that the rate of inflation remains low.

Khalid (2017) explored on effects of macroeconomic variables on the stock market volatility: the Pakistan experience. This research study empirically investigates the effects of interest rates, currency rates, and inflation rates on the performance of Pakistan's stock

market using annual time series data covering the years 1991–2017. Examining the short- and long-term relationships between macroeconomic variables and the KSE-100 index was the aim of this study. This was accomplished by using econometric techniques including the autoregressive distributed lag (ARDL) bounds testing procedure to co-integration and the Error Correction Model (ECM). The empirical results, which were obtained using the ARDL model, demonstrated that while inflation and currency rates have a beneficial effect on long-term stock market volatility, interest rates had a significant negative influence on the market index.

Özlen (2012) investigated on macroeconomic factors and stock returns. This study aims to ascertain the effects of specific macroeconomic variables on the stock returns of 45 companies in 11 distinct industries, including the rate of inflation, interest rates, exchange rates, current account deficits, and unemployment rates. We take data from February 2005 to May 2012 and apply the autoregressive distributed lag technique. The research provides the results of the empirical analysis and the conclusion of the findings. The implications for further study and practice are covered in the conclusions.

Table 1

Summary of Review

SN	Author & Year	Variables	Methodology	Major Findings
1	Hanitha, (2024)	Inflation, Exchange rate, Inflation and FTSE 100	Regression analysis	These results support the Maximum Eigenvalue Test and the Trace Test's conclusion that there is long-term co-integration between the study variables.
2	Hedau, (2024)	Inflation, interest rate, Dowjones, Exchange rate, NIFTY 50 performance	Quantitative Method	Analysis reveals that the Dow Jones index and fluctuations in exchange rates are the main factors affecting the NIFTY 50 index. However, experts think that other factors including political stability, the status of the developed world

				economy, and India's bilateral relations with other countries must also be taken into account when forecasting the movement of the NIFTY 50 index.
3	Amanda (2023)	Inflation, exchange rates, interest rates, stock prices.	Quantitative Method	Between 2018 and 2020, inflation, interest rates, and exchange rates all have a positive and considerable impact on the dependent variable, which is the stock price of transportation companies listed on the IDX.
4	Hanuransyah (2023)	Composite Index (ICI), the rates of inflation, Bank interest rate, and Dollar Exchange (USD/IDR).	Quantitative research approach- Multiple linear regression.	The results showed that the interest rate determined by the Ordinary Least Square (OLS) of the Composite IDX is dependent on the overall movement of exchange rates.
5	Alzoubi (2022)	Consumer price index, interest rate, domestic credit, real economic activity and Amman Stock Exchange performance.	Autoregressive Distributed Lag	Except for domestic credit as a percentage of GDP, everything is important. Both the consumer price index (CPI) and the interest rate (IDR) are quite important and have the proper indicators.
6	Farras (2021)	Banking institutions inflation, interest rates, and exchange values.	Descriptive Technique	These findings demonstrated that people working in the banking industry are mostly immune to macroeconomic factors, with the exception of exchange rates. Additionally, it demonstrates that most individuals working in the

				financial industry use foreign currencies—more specifically, the US dollar or US currency—instead of rupiahs for transactions.
7	Suhadak (2021)	Exchange Rates, Inflation, Interest Rates and the Composite Stock Price Index.	Explanatory research with a quantitative approach.	Interest rates are unaffected by exchange rates; inflation significantly and favorably affects interest rates; exchange rates significantly and unfavorably affect inflation; and interest rates significantly and favorably affect inflation. Both inflation and currency rates have a positive but negligible impact on the Composite Stock Price Index.
8	Parab (2020)	Macroeconomic variables (GDP, Inflation, exchange rate and stock market returns.	Causal Relations Method	The study demonstrated that stock market returns are significantly impacted by macroeconomic issues, and that the influence changes depending on the structural period. The results are meant to significantly advance the finance literature and aid in the evaluation of the Indian stock market by market participants and research experts.
9	Ilhan (2020)	COVID-19 pandemic situation, economies activities us simulations and forecasts.	Least square method of regression	The exchange rate is the macroeconomic variable that has the most impact on BIST 100, according to the quantitative magnitude of the coefficients.
10	Emenyi	Macroeconomic	Descriptive	The study's findings will

	(2020)	variables and Nigerian Stock Market during the 2020 covid-19 lockdown.	Research Design	contribute to the theoretical and practical knowledge base about the macroeconomic factors affecting stock market performance.
11	Fahlevi (2019)	Foreign exchange rates, inflation rates, and interest rates and stock prices in Indonesia	Regression analysis	The findings of the study showed a relationship between the independent and dependent variables.
12	Khan (2019)	Exchange rate and stock returns of Shenzhen stock exchange.	ARDL model	The exchange rate has a substantial and adverse impact on the stock returns of the Shenzhen stock exchange, as indicated by the anticipated ARDL outcomes. The findings indicate that inflation and interest rates have a statistically significant detrimental effect on stock returns.
13	Mgammal (2018)	Stock prices and exchange rates	Regression analysis	The exchange rate has a favorable effect on the United Arab Emirates stock market price index, but not on the Kingdom of Saudi Arabia. Additionally, the long-term analysis found that the exchange rate has a negative effect on the index of stock market prices in the United Arab Emirates. However, there is no relationship between these traits in Kingdom Saudi Arabia.
14	Haider (2018)	Financial and macro-economic	Multiple Regression	The KMI 30 Index has a negative correlation with interest rates and

		variables on Karachi Meezan Index 30.	Model	gold prices, whereas the exchange rate and the KMI 30 Index have a positive correlation. Our regression model indicates that there is no meaningful association between the inflation rate and the KMI 30 Index.
15	Yunita (2018)	Macroeconomic factors such as exchange rate changes, BI rate, inflation rate and stock exchange.	Generalize Autoregressive Conditional Heteroscedasticity (GARCH) is used as the analysis method.	The results show that exchange rate fluctuation is the only factor that has a substantial impact on the financial sector stock price index. Neither the BI rate nor inflation have a major effect on the banking sector stock price index.
16	Balagobei (2017)	Macroeconomic variables and stock market returns in Sri Lanka.	Panel data Regression analysis	The money supply in Sri Lanka is the only macroeconomic factor that influences stock market performance. The return on the Colombo stock market is negatively impacted by factory production and interest rates. Both inflation and exchange rates have a favorable effect on stock market returns.
17	Jamaludin (2017)	Macroeconomic variables namely inflation, money supply (MS), and exchange rate (ER)	Panel least square regression techniques.	Stock market returns, or ROA and ROE, are significantly influenced by both the inflation rate and the ER. MS is shown to be insignificant.

18	Khalid (2017)	Iterest rates, exchange rates and inflation rates and stock market performance.	Error Correction Model (ECM) and autoregressive distributed lag (ARDL)	Interest rates significantly impacted the market index negatively, in contrast to the inflation and currency rates, which have a long-term positive effect on stock market volatility.
19	Özlen (2012)	Macroeconomic variables including inflation rate, exchange rate, interest rate, current account deficit, unemployment rate and stock returns.	Autoregressive distributed lag method	Overall, the results indicate that interest rates and exchange rates are the two most significant factors affecting the companies' stock price fluctuations. The stock returns of any industry are extremely vulnerable to changes in interest rates and exchange rates.

2.3 Research Gap

Investors place a great deal of importance on stock market performance, and they respond to macroeconomic factors that could impact that performance. Interest rates, inflation, and other macroeconomic variables are three of the most significant determinants of the stock market. This study will help investors make judgments by providing real data on how GDP, inflation, and interest rates affect the stock market. For this reason, the GDP, interest rates, and inflation rate for the 14-year period between 2010–11 and 2023–24 are selected. Data from the NEPSE website will be used to calculate the fourteen-year stock index. There was not enough time to produce a comprehensive inquiry in the report's production schedule. Additionally, the analysis was constrained by the sample size, which might have affected the results. The research's findings were derived using regression, correlation, and mean. Regression analysis and correlation are used to measure the linear relationship between two variables, however accuracy is not always certain. Two variables may have a low correlation even when they have a strong nonlinear relationship. Some researchers may have used Treasury bills in place of interest rates, while others

may have used fixed deposits. One of the research gaps in this dissertation is the resulting variation in results, findings, and conclusions.

The literature has examined the impact of inflation and interest rates on stock indices. Understanding inflation, interest rates, and the stock index will be helpful to those who support government involvement through monetary and fiscal policies to manage GDP, inflation, and interest rates. An empirical evaluation of studies on the macroeconomic parameters under consideration has been conducted. The relationship between the GDP, inflation, interest rates, and stock index is clearly a topic of continuous debate. Closing the gap is therefore the aim of the ongoing work.

CHAPTER III

RESEARCH METHODOLOGY

The study's methodology is presented in this chapter. Research technique is the cornerstone of every scientific inquiry, providing a systematic framework for conducting investigations. It encompasses every technique, strategy, and process applied to the gathering, analysis, and interpretation of data. With its theoretical and practical foundations, research technique aids in the development of concepts, the planning of investigations, and the production of significant results.

3.1 Research Design

Causal research designs have been used in this examination to address the many issues raised in the study. Observable data, fact-finding questions, and a descriptive and causal comparative research design were used in the study's execution. The main objective of descriptive and causal research is to portray the current state of circumstances. This is done in order to identify and characterize the characteristics of the variables of interest.

The causal study design has been used in order to examine the link between the independent and dependent variables. Causal research investigates the possible causes affecting a certain situation by observing the consequences that are currently occurring and looking for possible contributory factors. The reason for this is that the alleged causes and their consequences have already come to pass. The observation of the dependent variable or variables is the first step in causal research, which then moves on to the investigation of the independent variable or variables that have already occurred. Next, look backwards at the independent factors to see whether there are any connections or effects on the dependent variable or variables. Investigating the relationship between the NEPSE index and the GDP, inflation rate, and saving interest rate is the aim of this research design.

3.2 Nature and Sources of Data

Secondary data that was used in this study. Secondary sources of data have been used to understand the financing restriction position of small versus large, restricted versus unconstrained, high versus low interest coverage, high versus low stock tangibility, and low versus high influence of interest rate, GDP, and inflation rate on NEPSE index. The

information required for this study came from the yearly reports of the NRB and NEPSE. In order to examine the association between independent factors and NEPSE, the dependent variable, interest rates, GDP, and inflation rates have been collected during the fourteen-year period from 2066–2067 to 2079–2080.

3.3 Population and Sampling

The intricate connection between macroeconomic factors and stock market performance necessitates careful consideration of sample size and population selection. This point of view holds that the population is composed of all important macroeconomic variables that together affect stock market fluctuations. Interest rates, GDP growth, and inflation rates are some examples of these indicators. To examine links and causal relationships, researchers employ selective sampling techniques to extract representative samples from this enormous population. The data is only driven prior to and following the 2072 Nepalese earthquake. Seven years before and seven years after, a total of 14 years of data were collected from secondary sources. By looking at how changes in macroeconomic factors affect stock market behavior, analysts can get vital information for investment decisions.

3.4 Method of Analysis

Mean

The arithmetic mean of a range of values or quantities is called the mean, and it is calculated by dividing the total number of values by the number of values. The central tendency of the data is ascertained using the average. The arithmetic mean is the most widely used and understandable method for calculating central tendency. It is computed by adding together all of the data points in the population and dividing the total by the total number of points. The average of all long- and short-term interest rates, as well as the inflation rate in relation to the stock index, are calculated in this study.

$$\text{Mean} = \frac{\sum fx}{n}$$

Where, X= Value of responses of each independent or dependent variable

N= Number of statements

Standard Deviation

The degree of variation or dispersion in a set of data values is expressed by a statistic known as the standard deviation (SD). A low standard deviation indicates that the data points typically fall close to the set's mean, also referred to as the predicted value, whereas a high standard deviation indicates that the data points are distributed across a wider range of values. Unlike variance, the standard deviation has the same units of measurement as the data, which is a useful feature. The standard deviation is calculated in this study to quantify the risk factor in the dependent variables due to the influence of the dependent variables.

$$\sigma = \frac{\sqrt{\sum(x-\bar{x})^2}}{N}$$

Where, X = Value of responses of each dependent or independent variable.

$\bar{X}$ = Mean value of responses of each dependent or independent variable.

N = Number of response

Correlation

Correlation is a statistical technique used to ascertain whether and how strongly two variables are related. For example, taller people tend to be heavier than shorter persons. The collaboration is not perfect. Correlations are useful tools because they can show a predictive relationship that can be applied in practical settings. Any relationship between two or more variables undergoes simultaneous changes in degree and kind over time. The range of the correlation coefficient is -1 to +1. Numbers around +1 suggest a high degree of positive connection, whereas values near -1 indicate a high degree of negative correlation. In this study, correlation is calculated to assess each sample's degree of association between independent and dependent variables.

$$\frac{n\sum dx\sum dy - \sum dx\sum dy}{\sqrt{[n\sum dx^2 - (\sum dx)^2]}\sqrt{[n\sum dy^2 - (\sum dy)^2]}}$$

Where, X= Value of independent variable.

Y=Value of dependent Variable

N= Number of responses

Regression

One statistical technique for estimating the relationship between the variables in statistical tool modeling is regression analysis. A variety of modeling and analysis approaches are used to investigate the relationship between a dependent variable and one or more independent variables. In many areas, regression analysis closely resembles machine learning and is a widely used tool for forecasting and prediction. The sorts of correlations between independent and dependent variables, as well as which independent variables are related to which of the latter, can also be examined using regression analysis. In this study, the direction of the association between the independent and dependent variables for each sample is ascertained by regression analysis. The study's model is shown below.

Multiple regressions: $y = a + b_{1.}x_1 + b_{2.}x_2 + \ldots + b_{n.}X_n$, for this study the model will be:

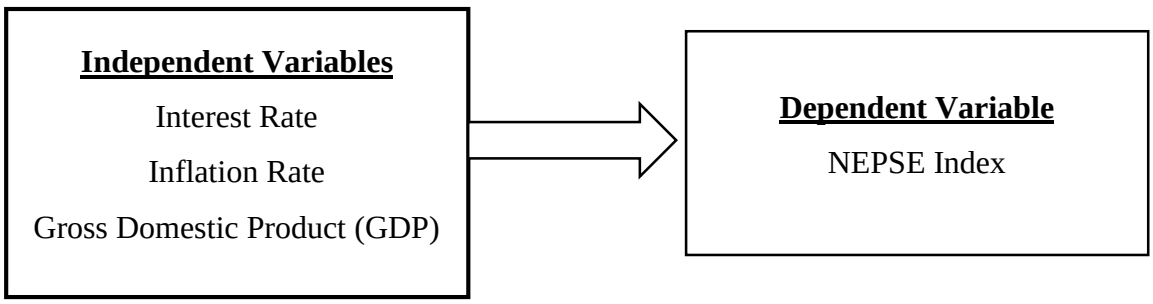
$$\text{NEPSE Index} = \alpha + \beta_1 \text{Inflation Rate} + \beta_2 \text{Interest rate} + \beta_3 \text{GDP} + e$$

3.5 Research Framework and Definition of the Variables

The use of a research framework has helped to clarify the variables in the study. This study's primary focus is the stock index. The relationship between the stock index and four non-equity macroeconomic indicators—inflation, lending interest rates, fixed interest rates, and saving interest rates—is attempted to be examined. The stock index is the dependent variable, whereas the loan interest rate, savings interest rate, fixed interest rate, and inflation rate are independent variables. Figure 1 shows the study's research framework.

Figure 1

Research Framework



(Source: Khatri, 2019)

The research architecture and study objectives are depicted in the figure. The study's goal is to ascertain how certain variables—interest rates, GDP, and inflation rates—affect the NEPSE index. The following are the definitions of each variable used in the study:

Interest Rate

The interest rate is the expense a borrower bears when utilizing funds he does not own and has to pay back to the lender, who gains from his postponed use. Interest can also be expressed as a percentage of the total amount borrowed over a 12-month period. The interest rate of a bank deposit is the rate at which it increases over time. Interest is a charge or payment for the usage of funds and is typically expressed as an annual percentage of the principal. The central bank of a country uses the interest rate as a tool to keep an eye on any notable changes in the value of its currency. In order to avert a number of detrimental economic impacts, interest rates must increase in order to curb currency depreciation and lower inflation (Ross, 1976).

Inflation Rate

Inflation is the term used to describe a continuous increase in the general level of prices within an economy. Because of inflation, living expenses have gone up. Most people agree that excessive and erratic inflation can be bad for the economy as a whole, as well as for some businesses and consumers. Generally speaking, the inflation rate serves as a barometer for the price stability of the economy. Because the currency's purchasing power will increase in relation to other currencies, a situation with low inflation will result in a rising currency rate. Retail prices, or the annual percentage increase in prices, are the most often used metric to measure inflation. The inflation rate is the percentage increase in the consumer price index over the previous 12 months, which is released by the government each month. A steady rise in the level of general prices is the simplest definition of inflation. (Thapa, 2018).

Gross Domestic Product (GDP)

A statistical indicator of the percentage increase in the value of goods and services produced inside a nation's borders over a given time period is the GDP growth rate. Since it displays the rate of economic expansion or contraction, it is a crucial metric for assessing the state and trajectory of the economy. Governments and policymakers keep a careful eye on the GDP growth rate in order to evaluate the success of economic

initiatives and make educated decisions. An expanding economy is indicated by a positive growth rate, whilst a declining economy is shown by a negative rate. Sustainable GDP growth raises living standards, creates jobs, and increases a country's overall prosperity.

Stock market i.e. NEPSE Index

At the end of each day, the Nepal Stock Exchange releases the transaction index, also referred to as the NEPSE index. Simply stated, the unique base market capitalization is used to generate the NEPSE index. It is the first index that shows the functioning of the stock market. As the value and transaction of the transacted shares increase, so does the market capitalization value. Multiplying the total share value by the share value on a certain day yields the market capitalization. A distinct multiple value is calculated and added thereafter to ascertain the total because the share price and share number have different values. This is how market capitalization is calculated. The market capitalization of each company is added together to determine the total market capitalization. The stock exchange determines the market index based on market capitalization. When market capitalization increases, the NEPSE index rises, and when market capitalization decreases, the index falls (Shrestha, 2019).

CHAPTER IV

RESULTS AND DISCUSSION

In addition to identifying the factors impacting interest rates on savings, fixed-rate debt, lending, and inflation rates, this study attempts to provide light on the relationship between interest rates, inflation rates, and the Nepalese stock market. It determines the relationship and substantial influence between the interest rate, inflation rate, and stock index using a variety of statistical methods and methodologies. In order to offer the empirical results and identify the factors impacting the stock index, or NEPSE, the pertinent secondary data were gathered and thoroughly examined.

4.1 Analysis of Secondary Data

Secondary data analysis is the main technique employed in this study to produce the empirical findings. To increase visibility and clarity, the collected data were totaled and shown on a figure. The data shown spans the last fourteen years, from 2010–11 to 2023–24. Furthermore, the analysis has made use of regression analysis, correlation, mean, median, mode, and standard deviation. The link between the independent and dependent variables was investigated using regression analysis and correlation. The following tables were created using software and then modified in Excel.

Data on the NEPSE index, inflation rate, and saving interest rate were collected and analyzed using a range of methods in order to meet the many research questions. The question that a research effort seeks to answer is known as its research question. To ascertain whether saving interest rates have a significant or negligible effect on the NEPSE index, as well as whether fixed interest rates, lending interest rates, and inflation rates all have an impact on the index, data is being analyzed. The annual interest rate, inflation rate, and NEPSE index trends from 2010–11 to 2023–24 are depicted in the following chart. Descriptive, correlational, and multiple regression analyses have been computed using Microsoft Excel software.

Table 1

Information regarding inflation rate, interest rate and NEPSE index of last 14 years

Fiscal year	GDP	Inflation rate	Interest rate	NEPSE
2023/24	40.91	5.44	3.02	2097.1
2022/23	41.18	7.74	3.61	2009.5
2021/22	36.92	6.32	3.66	2883.4
2020/21	33.43	3.6	4.72	1394.77
2019/20	34.19	6.15	4.97	1259.02
2018/19	33.11	4.64	3.74	1212.36
2017/18	28.97	4.15	5.28	1583.57
2016/17	24.52	4.45	4.12	1718.15
2015/16	24.36	9.94	3.9	961.23
2014/15	22.73	7.21	5.9	1036.11
2013/14	22.16	9.08	6.3	518.33
2012/13	21.7	9.84	4.1	389.74
2011/12	21.57	8.32	8.22	362.85
2010/11	16	9.56	6.57	477.73

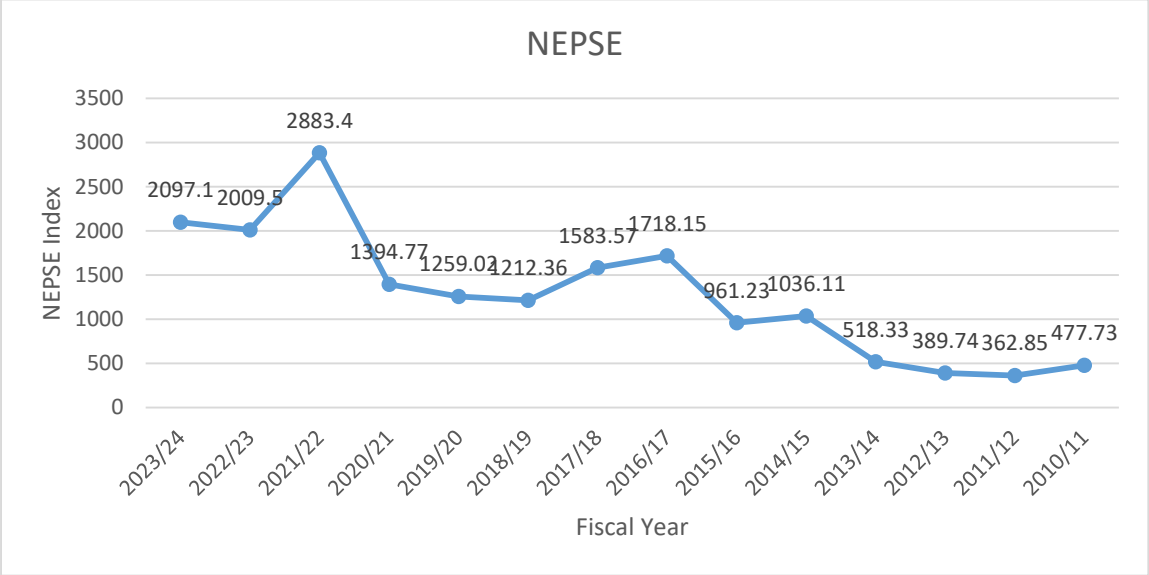
Trend of NEPSE Index

At the end of each day, the Nepal Stock Exchange issues the transaction index, also known as the NEPSE index. To put it another way, the NEPSE index is calculated using the base market capitalization. The first index to display stock market activity was this one.

The market capitalization value increases in tandem with the value and volume of traded shares. The total number of shares multiplied by the share price on a certain day yields the market capitalization. Since a share's price and number have different values, the total is calculated by multiplying the independent values and adding them up. The following figure illustrates the NEPSE index's 14-year trend.

Figure 2

Trend of NEPSE Index



The NEPSE index trend over the research period is depicted in figure 2. Over the years, the NEPSE Index exhibits a trend of oscillation, with major highs and lows. In 2020–2021, the index reached its highest point during that time, 2883.4. Additionally, it performed well in 2023–2024 (2097.1) and 2021–2022 (2009.5). 2011–12 saw the lowest value, 362.85. The years 2012–13 (389.73) and 2013–14 (518.33) are also low years. The index shows consistent rise until 2015/16, when it hit 1718.15, after bottoming out between 2011/12 and 2013/14. Before rising to its highest point in 2020–2021, it fell to 1212.36 in 2018–19 and then again to 1583.57 in 2016–17. Following its high in 2020–2021, the index fell to 1394.77 in 2021–2022, then slightly down to 9.5 in 2022–2023, before rising slightly once more in 2023–2024. Over the previous 14 years, there has been a great deal of volatility in the NEPSE Index. Following a protracted period of low values in the early 2010s, it saw a robust recovery from 2015 to 2021, reaching its highest point in 2020–2021. There has been a slight dip and recovery in the years that have followed. The general trend points to investor confidence being sensitive to market, political, and economic factors.

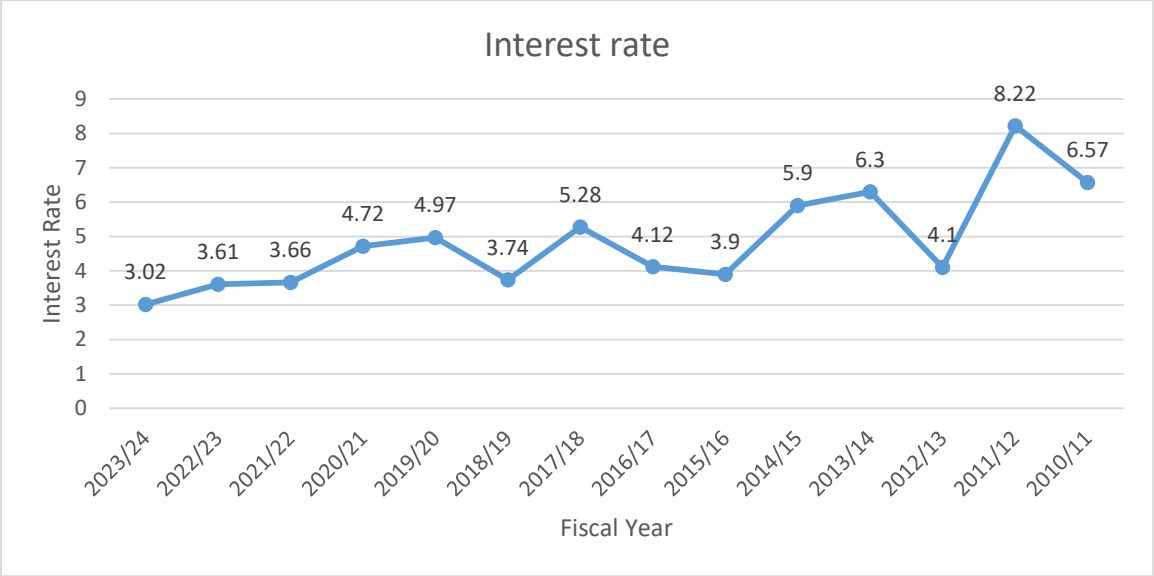
Trend of Interest Rate

The interest rate is the cost a borrower incurs while utilizing funds he does not have and must reimburse the lender by postponing his own consumption through the loan. Interest can also be expressed as a percentage of the entire amount borrowed over a one-year

period. The rate at which the value of a bank deposit rises over time is known as the interest rate. Interest is typically stated as a percentage of the principal and is a charge or payment for the usage of funds.

Figure 3

Trend of Interest Rate



The average interest rate during the course of the study is shown in Figure 3. Throughout the years, the interest rate fluctuates rather than steadily rising or falling. In 2010–11, the interest rate was at its lowest, 3.02%. In 2011–12, the interest rate peaked at 8.22%. a significant rise from 4.1% in 2012–13 to 8.22% in 2011–12 (the graph seems to show years declining from left to right, therefore the x-axis may be inverted). There was another notable increase from 2022–2023 (3.66%) to 2023–2024 (4.32%). a steady increase from 3.66% to 4.32%, suggesting that interest rates have somewhat increased recently. There have been multiple ups and downs in the interest rate between 2011–12 and 2016–17. The interest rate has not shown a consistent trend during the last 10 years, according to the graph. Sharp increases and drops occur occasionally, which could be a reflection of changes in monetary or economic policy during particular fiscal years. Interest rates appear to be trending modestly upward in the most recent years.

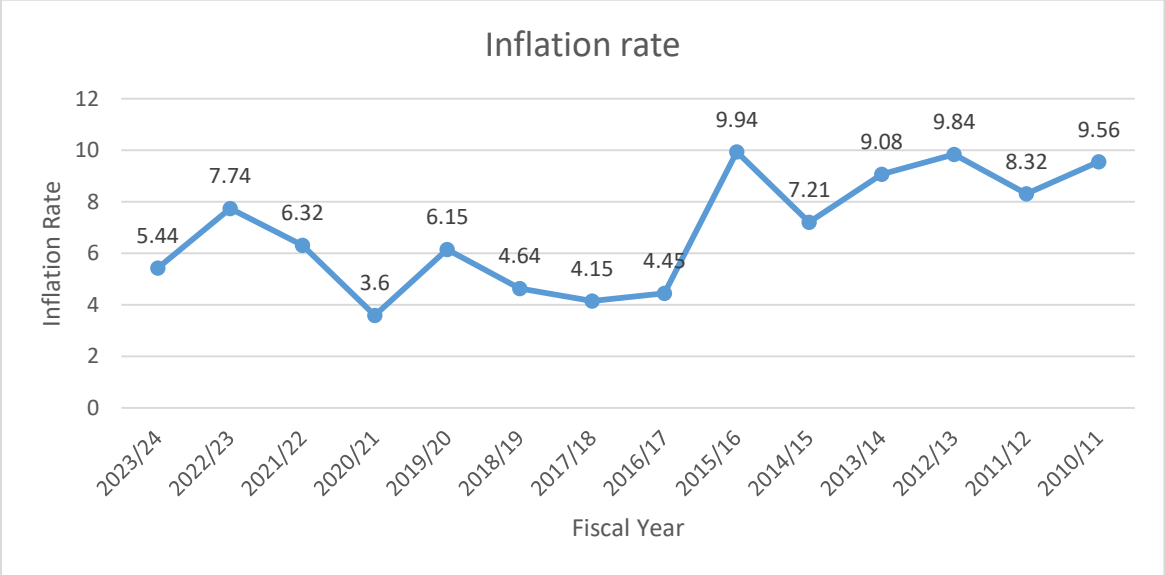
Trend of Inflation Rate

The consistent rise in the average level of prices within an economy is known as inflation. The cost of living has increased due to inflation. It is commonly acknowledged that both

the economy as a whole and specific firms and individuals can be impacted by high and unstable inflation. The inflation rate is typically used to assess the economy's price stability. Since the value of the currency will rise relative to other currencies, a situation with low inflation will lead to rising exchange rates. The most often used metric of inflation is retail prices, which calculate the annual percentage growth in prices. The following figure shows the inflation rate trend over the study period.

Figure 4

Trend of Inflation Rate



The inflation rate trend over the research period is depicted in Figure 4. From a peak of 9.56% in 2010–11 to a low of 3.6% in 2020–21, the inflation rate dropped dramatically. After 2020–2021, inflation shows a modest recovery, rising to 7.74% in 2022–2023 before dipping marginally to 5.44% in 2023–2024. Inflation peaked in 2015–16 at 9.94%. 9.84% in 2012–13, 9.56% in 2010–11, and 9.08% in 2013–14 are other high marks. The rate of inflation dropped significantly from 9.94% to 4.15% between 2015–16 and 2017–18. Between 2016–17 and 2019–20, the rate fluctuated between 4 and 6%, remaining comparatively constant. The inflation rate peaked at 7.74% in 2022–2023 after bottoming out at 3.6% in 2020–2021. In 2023–2024, it decreased little to 5.44%. With intervals of notable spikes and decreases, the graph displays erratic inflation tendencies. Inflation spikes in 2015–16 and after 2020 were probably brought on by economic factors, maybe as a result of macroeconomic events, policy changes, or worldwide supply shocks. The

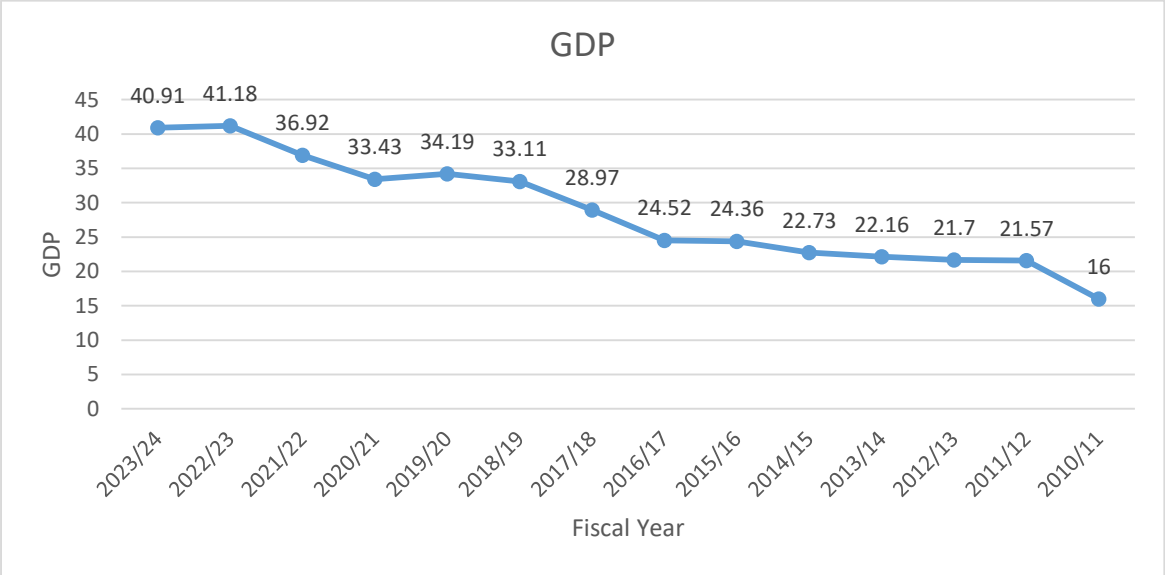
recent decline in 2023–2024 raises the prospect of stabilization or the influence of inflation control policies.

Gross Domestic Product (GDP)

The gross domestic product is the best indicator of a country's economic health. The total output produced by all of the people and companies in a country is represented by the GDP. C + I + G + (X-M) is the standard formula used to determine a nation's gross domestic product. It does not matter if they are citizens or foreign-owned companies. If they are within the country's borders, the government counts their output as GDP (Davidson, 1996).

Figure 5

Gross Domestic Product (GDP)



The GDP trend over the study period is depicted in Figure 5. Overall, the GDP decreased between 2010–11 and 2023–24. The GDP was 16 in 2010–11, and it reached its greatest point in 2023–2024, at about 40.91. From 2010–11 to 2023–24, there is a steady rise, with slight variations in between. The overall trend from 2010–11 to about 2016–17 is negative, with a few fiscal years (such 2018–19 and 2019–20) showing a modest increase. The GDP increases significantly between 2020–2021 and 2023–2024, suggesting a potential rebound or boom phase. According to the graph, GDP declined steadily from 2010–11 to about 2016–17 before stabilizing and then seeing a significant recovery in the

following years, particularly after 2020–21, which peaked in 2023–24. Depending on the situation, this could signify post-crisis growth, policy changes, or economic recovery.

4.5 Descriptive Analysis

Table 2

Descriptive Statistics

Variables	Minimum	Maximum	Mean	Std. Deviation
GDP	16.00	41.18	28.6964	7.94347
Inflation Rate	3.60	9.94	6.8886	2.23818
Interest Rate	3.02	8.22	4.8650	1.44823
NEPSE	362.85	2883.40	1278.8471	738.58572

(Source: Appendix II)

All independent and dependent variables' mean, standard deviation, minimum, maximum, and number of observations during the study period are shown in Table 2. The SPSS program produced the results. The dataset's average GDP value is roughly 28.70, with values ranging from 16.00 to 41.18. The GDP numbers exhibit moderate fluctuation, as seen by the standard deviation of 7.94. The average inflation rate is 6.89%, with a range of 3.60 to 9.94%. The standard deviation indicates that inflation rates vary somewhat between observations. Interest rates have a mean of 4.87% and range from 3.02% to 8.22%. The values are grouped near the mean, as indicated by the comparatively low standard deviation. With a high average of roughly 1278.85, the NEPSE index values exhibit a broad range from 362.85 to 2883.40. The stock market index shows notable swings, as seen by the extremely high standard deviation (738.59). Interest rates, GDP, and inflation all exhibit rather steady ranges of variations. The NEPSE exhibits the most fluctuation, indicating that the stock market was very volatile throughout the investigated time.

4.6 Correlation Analysis

The correlation coefficients between the value of the Nepal Stock Index (NEPSE), the interest rate (SIR), and the inflation rate (IFR) are computed for the years 2010–11–2023–2024.

Table 3

Correlation between NEPSE, Interest rate, GDP and inflation rate

Variables	GDP	Inflation rate	Interest rate	NEPSE
GDP	1			
Inflation rate	-.546*	1		
	0.044			
Interest rate	-.679**	0.321	1	
	0.008	0.263		
NEPSE	.805**	-.576*	-.669**	1
	0.001	0.031	0.009	

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

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

(Source: Appendix III)

The link between the dependent variable (NEPSE) and the independent variables (interest rate, GDP, and inflation rate) is shown in Table 3. Interest rates and inflation rates have a strong negative relationship with GDP. At the 0.05 and 0.01 levels of significance, respectively, GDP and the inflation rate and interest rate have a negative but significant association. At the 0.01 level of significance, GDP also has a strong positive and significant correlation with NEPSE. There is a weak positive link between the inflation rate and interest rates that is not statistically significant. At the 0.05 level of significance, it demonstrates a strong negative and significant correlation with NEPSE. NEPSE has a negative correlation with interest rates and inflation and a positive correlation with GDP. At the 0.01 level of significance, interest rates and NEPSE have a strong and substantial negative association. This suggests that robust GDP growth, which tends to be accompanied with lower GDP, inflation, and interest rates, boosts the stock market. On the other hand, inflation and rising interest rates typically slow down stock market performance.

4.7 Regression Analysis

Regression analysis makes it simpler to ascertain how independent factors affect the dependent variable. The regression analysis uses the full sample. The study uses

regression analysis to examine interest rates, GDP, and inflation in connection to the NEPSE index. The NEPSE index is influenced by two factors: the interest rate and the rate of inflation. Multiple regression models are used to ascertain the effects of several independent factors on dependent variables.

Table 4

Model Summary of NEPSE

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.841a	.708	.620	455.31929

a. Predictors: (Constant), Interest rate, Inflation rate, GDP

(Source: Appendix IV)

The coefficient of determination, or R-squared, is shown in the model summary and can be used to explain variation. As can be seen from Table 5, the R-squared value is 0.708, meaning that the independent variables of interest rate, GDP, and inflation account for 70.8 percent of the variation in the NEPSE index. The remaining percentage, however, remains unexplained in this study.

Table 5

ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5018458.636	3	1672819.545	8.069	.005b
	Residual	2073156.604	10	207315.660		
	Total	7091615.240	13			

a. Dependent Variable: NEPSE

b. Predictors: (Constant), Interest rate, Inflation rate, GDP

The p-value is 0.005, which is less than the alpha value of 0.05, according to the ANOVA. As a result, the model accurately forecasts how the dependent and independent variables will interact. The interest rate, GDP, and inflation rate are therefore important independent factors in explaining the variation in the NEPSE index. Stated differently, NEPSE is significantly influenced by at least one of the three independent factors.

Table 6

Regression Coefficients

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	977.012	1340.618		.703	.498
	GDP	44.744	22.607	.487	2.047	.037
	Inflation rate	-70.101	67.541	-.212	-1.038	.324
	Interest rate	-125.385	119.148	-.246	-1.052	.317

a. Dependent Variable: NEPSE
(Source: Appendix IV)

The values of the unstandardized beta coefficients (β1, β2, and β3) and the constant α, which can be used to write the estimated equation for the impact of independent variables on NEPSE, are also summarized in Table 6. The estimated equation can be written as follows using the values of the constant and unstandardized beta coefficients:

Y = 977.012 + 44.744 GDP – 70.101 INF – 125.385 IR

The relative significance of the independent variables in contributing to the variation in the dependent variable is explained by the beta coefficients in the regression analysis. GDP (β1= 44.744, p=0.037), inflation rate (β2= -70.101, p=0.324), and interest rate (β3= -125.385, p=0.317) are the findings displayed in Table 5. The findings demonstrated that, while all other factors were held constant, a one unit increase in the inflation rate and interest rate would result in a 70.101 and 125.385 percent decline in the NEPSE index, respectively. In a similar vein, the NEPSE index would rise 48.582 percent for every unit increase in the GDP factor. In summary, GDP significantly affects NEPSE at the 0.05 level of significance, but interest rates and inflation have negligible effects on the NEPSE index.

4.9 Discussion

Interest rates have a major beneficial influence on the NEPSE index. According to the negative relation, the NEPSE index will rise in the event of a decrease in interest rates and fall in the event of an increase in inflation. It has been shown that the hypothesis that the interest rate, GDP, and inflation rate have no discernible effects on the NEPSE index is incorrect. The NEPSE index will rise as a result of investors withdrawing their funds from banks and other financial institutions and putting them into the stock market. Additionally, they will not take a chance by investing in the stock market if they are

receiving high returns on their fixed deposit investments. Interest rates have a major beneficial effect on the NEPSE index. It has an accurate inverse relationship with the NEPSE index, according to the results of regression research. According to the positive relation, the NEPSE index will rise in response to an increase in the lending interest rate and fall in response to a decrease in the lending interest rate. The results pertaining to interest rates and the NEPSE index were found to be in agreement with Shrestha and Pokhrel (2019). The inflation rate has a negligible effect on the NEPSE Index.

The results indicated that there was no significant relationship between the independent and dependent variables. There will be no effect on the NEPSE index whether the inflation rate rises or falls. There is no correlation between the inflation rate and the NEPSE Index. The hypothesis that the inflation rate has no discernible effect on the NEPSE index has been validated. The results pertaining to the inflation rate and NEPSE index were found to be in agreement with those of Laichena and Obwogi (2015). The primary constraint of this study is that all of the data used were secondary, and the data from the prior year was unavailable because of COVID-19. The sample size has also limited the analysis, which may have had an impact on the findings. The sole purpose of correlation and regression models is to determine how independent variables affect dependent variables. However, if the research had been conducted using models like correlation analysis and the ANOVA test, correct and consistent results might have been achieved. The only factors used to examine the impact on the NEPSE index were the interest rate, GDP, and inflation rate. The GDP, money supply, exchange rate, NRB policy, news, rumors, and speculation are just a few of the numerous additional macroeconomic variables that have an impact on the stock index. A variety of macroeconomic factors, such as interest rates, inflation rates, money supply, NRB policy, exchange rates, and GDP, can be used to examine how they affect the stock index. Future studies can examine this in greater detail.

Savings interest rates and fixed interest rates have a major detrimental effect on the NEPSE index. According to the negative relation, the NEPSE index will fall if the fixed interest rate and saving interest rate rise, and it will rise if the interest rate falls. The idea that fixed interest rates and saving interest rates have no discernible effect on the NEPSE index has been shown to be incorrect. Because savings and fixed deposit accounts offer low interest rates, investors withdraw their funds from banks and other financial

institutions and put them into the stock market, which raises the NEPSE index. Additionally, they will not take a chance by investing in the stock market if they are receiving high returns on their fixed deposit investments.

Interest rates have a major detrimental effect on the NEPSE index. It has an accurate inverse relationship with the NEPSE index, according to the results of regression research. According to the negative relation, the NEPSE index will rise if the lending interest rate falls and fall if the lending interest rate rises. It has been shown that the hypothesis that the loan interest rate has no discernible effect on the NEPSE index is incorrect. Therefore, when interest rates are low, depositors can use their accounts to purchase stocks, and individuals can borrow money from banks and other financial institutions to engage in the stock market at low interest rates. Suhadak (2021), Parab (2020), Ahmad and Raoof (2010), Joseph (2012), Naik and Padhi (2012), Shrestha and Subedi (2014), Khan (2019), Haider (2018) Khatri (2019), Shrestha (2019), and Panta (2020) all agreed with the findings about the interest rate's relationship to the NEPSE index, while Rostamy (2013), Goswami and Jung (2013), Hasan and Samarakoon (2013), and Gautam (2018) disagreed with them.

The inflation rate has a negligible effect on the NEPSE Index. The results indicated that there was no significant relationship between interest rates and the dependent variable, NEPSE. There will be no effect on the NEPSE index whether the inflation rate rises or falls. There is no correlation between the inflation rate and the NEPSE Index. The hypothesis that the inflation rate has no discernible effect on the NEPSE index has been validated. Consistent with Amanda (2023), Farras (2021), Emenyi (2020), Fahlevi (2019), Yunita (2018), Balagobi (2017), Khalid (2017), and Ergun (2012), the conclusions of the inflation rate's association to the NEPSE index were found.

The primary constraint of this study is that all of the data used were secondary, and the data from the prior year was unavailable because of COVID-19. The sample size has also limited the analysis, which may have had an impact on the findings.

A variety of macroeconomic factors, such as interest rates, inflation rates, money supply, NRB policy, exchange rates, and GDP, can be used to examine how they affect the stock index. Future studies can examine this in greater detail.

CHAPTER V
SUMMARY AND CONCLUSION

5.1 Summary

Interest rates, GDP, inflation, and the stock index are covered at the outset of the course. There are three key components to a nation's economic development. The effects of inflation and interest rates on stock indexes have significant ramifications for government policy on financial markets, risk management techniques, monitoring policy, and the value of financial securities. The two main economic factors influencing common stocks are interest rates and inflation. There are several reasons why it is crucial to research the connection between macroeconomic variables and stock price. First, it aids decision-makers in comprehending the complete impact of current and future laws and regulations. Second, investors would make better investment choices and lower their risk exposure if they were fully aware of and comprehended this relationship. Finding the dynamic relationship between interest rates, GDP, and inflation rates and stock indexes is the study's main goal.

Numerous theories and works of literature have been reviewed in the second chapter. It includes important discoveries as well as theoretical and methodological developments on a particular topic, making it the state of the art. It provides a fundamental comprehension of the topic. Literature reviews are secondary sources that do not offer original or novel experimental work. These reviews, which are connected to works with an academic bent, are usually found in scholarly journals. It includes both actual data and an examination of pertinent research theories.

The third chapter primarily addresses the study's methodology. To examine the relationship between the interest rate, GDP, inflation rate, and NEPSE index, the causal study design was chosen. It uses a number of quantitative statistical methods and tools, including regression, correlation, and descriptive analysis, to ascertain how an independent variable affects the NEPSE index. In order to arrive at the conclusions, secondary data was gathered and systematically examined. The data was analyzed using the following tools: regression, correlation, mean, median, and standard deviation. To

determine the substantial influence of independent variables on dependent variables, regression analysis and correlation were used.

The results of the fourth chapter demonstrate the negligible harm that the inflation rate causes to the stock index. The NEPSE Index will be negatively impacted by changes in the inflation rate because the relationship has been determined to be significant. Interest rates have a major beneficial influence on the NEPSE index. The stock index will be negatively impacted by changes in interest rates since the relationship has been determined to be significant. Therefore, when interest rates are low, depositors can use their accounts to purchase stocks, and individuals can borrow money from banks and other financial institutions to engage in the stock market at low interest rates.

5.2 Conclusion

This analysis comes to the conclusion that interest rates on loans, fixed interest rates, and savings are all correlated with changes in the stock index. It is evident that the primary factor influencing the Nepalese stock market is interest rates. The stock index is moving in the opposite direction from the interest rate. Because of the cheap cost of credit and the low opportunity cost of keeping bank deposits, low interest rates increase the appeal of stocks.

Interest rates have a negligible positive impact on the NEPSE index. The NEPSE index will climb when interest rates decline and fall when inflation increases, based on the negative relationship. It has been shown that the NEPSE index is not much impacted by inflation or interest rates. Due to low interest rates, investors will take their money out of banks and other financial institutions and put it into the stock market, which will cause the NEPSE index to climb. Additionally, they will not take on the danger of stock market investment if they are receiving excellent returns on their fixed deposits.

The NEPSE index was shown to be unaffected by changes in the inflation rate. The results showed how the inflation rate affected the NEPSE index. It is evident that the stock index is influenced by more than just the interest rate, GDP, and inflation rate. The stock index is heavily influenced by news, rumors, and conjecture. It is challenging to quantify and use these kinds of variables in the model. Regression and correlation models are only used to ascertain how independent factors affect dependent variables. However,

accurate and consistent results may have been obtained if models such as the ANOVA test and correlation analysis had been assessed to conduct the research. The interest rate and the inflation rate were the sole variables considered to analyze their impact on the NEPSE index. However, the stock index is also influenced by a variety of other macroeconomic factors, including as the GDP, money supply, exchange rate, NRB policy, news, rumors, and speculation.

5.3 Implications

This section focuses on the study's ramifications, including recommendations meant to give the parties involved pertinent information and potential directions for further research, based on the study's main findings and other pertinent concerns. There are several recommendations for different policy makers, management, and business fields, but only the most important ones are listed below due to the thesis's time constraints and limitations.

- The NEPSE index is affected by a number of things. Some of the key determinants of the NEPSE index are the subject of this study. The study's findings will have significant ramifications and are anticipated to benefit the NEPSE market, the banking industry, individuals, and institutions. Every factor that influences the NEPSE index, whether directly or indirectly, should be assessed.
- For both international and domestic investors, knowing how inflation and interest rates affect the Nepali stock market can help with portfolio management and careful investment planning.
- Other factors that impact the stock index include the GDP, inflation rate, loan interest rate, fixed interest rate, and saving interest rate. The GDP, money supply, exchange rate, political events, gossip, and speculation are some of the factors that also have an impact on the stock index. The NRB's share collateral lending policy has had a significant impact on the stock market.
- The known macroeconomic data, such as interest rates, GDP, and inflation rate variables, are insufficient to fully predict the direction of change in the stock index; rumors, news, and speculations have a significant impact on the NEPSE index.

- This market should be more transparent by providing easy access to information about listed companies in order to decrease rumors and speculation. In reality, the relevant authorities should improve communication and transparency to dispel rumors and gossip in the marketplace.
- In addition to being useful as a source of knowledge, it might pique interest in further research in this or similar subjects concerning the actions of both local and foreign investors.

Reference

Ahmad, M. & Raoof, A. (2010). Do interest rate, exchange rate effect stock returns? *International Research Journal of Finance and Economics*, *50*, 145-180.

Alam, M., & Uddin, G.S. (2009), Relationship between Interest Rate and Stock Price: empirical evidence from developed and developing countries, *International Journal of Business and Management, 4*(3), 43-51.

Alzoubi, M. (2022). Stock market performance: Reaction to interest rates and inflation rates. *Banks and Bank Systems*, *17*(2), 189-198.

Amanda, S. T., Akhyar, C., & Ilham, R. N. (2023). The Effect Of Inflation, Exchange Exchange, Interest Rate on Stock Price in the Transportation Sub-Sector, 2018-2020. *Journal of Accounting Research, Utility Finance and Digital Assets*, *1*(4), 342-352.

Balagobei, S. (2017). Macroeconomic variables and stock market returns in Sri Lanka. Balagobei, S.(2017). Macroeconomic Variables and Stock Market Returns in Sri Lanka. *Asian Journal of Finance & Accounting*, *9*(2), 206-218.

Barasa, J. W. (2014). Macroeconomic determinants of stock market performance in Kenya. Case of Nairobi Securities Exchange, 20, 77-83.

Cassel, G. (1918). Causal relationship between macro-economic variables and stock market. *Journal of Social Sciences, 30*(2), 263-274.

Dhami, J. (2017). *Determinants of Stock Market Performance in Nepal.* An Unpublished Master's dissertation, Submitted to Central Department of Management, Tribhuvan University.

Emenyi, E., & Effiong, S. A. (2020). Macroeconomic variables and stock market performance: Covid–vectors or Covid-variables. *Journal of Critical Reviews, 7*(12), 4685-4693.

Fahlevi, M. (2019, August). The influence of exchange rate, interest rate and inflation on stock price of LQ45 index in Indonesia. *In First International Conference on Administration Science (ICAS 2019)*, 157-163). Atlantis Press.

Fama, E.F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance, 25*(2), 383-417.

Farras, N. R., & Wijaya, J. H. (2021). The impact of inflation, interest rate and exchange value on banking companies' performances during the 2017-2020 period. *Technium Soc. Sci. J., 17*, 222.

Fisher, I. (1930). The theory of interest. *The Quarterly Journal of Economic, 4*(3), 499516.

Gautam, R. (2018). *The Impact of Interest rate, Exchange rate and Inflation rate on Stock Returns.* An Unpublished Master's dissertation, Submitted to Central Department of Management, Tribhuvan University.

Ghimire, J. (2017). *Impact of Interest rate on Stock Return.* An Unpublished Master's dissertation, Submitted to Central Department of Management, Tribhuvan University.

Goswami, G., & Jung, S. (2013). Stock market and economic forces: evidence from Korea. *Journal of Management, 3,* 42-70

Gunsel, N., & Cukur, S. (2007). The effects of macroeconomic factors on the London Stock returns: a sectoral approach. *International Research Journal of Finance and Economics, 10,* 140-152.

Haider, S. W. (2018). Impact of interest rate, inflation rate, exchange rate and gold prices on Karachi Meezan Index 30. *European Journal of Islamic Finance, (10).*

Hanuransyah, T., & Soebagiyo, D. (2023). The Analysis of Inflation, Exchange rate, and Benchmark Interest Rate (BI rate) Influences on the Indonesia Composite Index (ICI). *Journal of Management Science (JMAS), 6*(2), 249-253.

Hasan, T., & Samarakoon, L. P. (2013). Short-term interest rates and expected stock returns: evidence from Sri Lanka. *Journal of Social Science Research, 4*(3), 2028.

Humpe, A. & Macmillan, P. (2017), Can macroeconomic variables explain long-term stock market movements? *Applied Financial Economics, 19*(2), 11-19.

İlhan, A., & Akdeniz, C. (2020). The impact of macroeconomic variables on the stock market in the time of Covid-19: The case of Turkey. *Ekonomi Politika ve Finans Araştırmaları Dergisi, 5*(3), 893-912.

Ioannidis, C., and Kontonokas, A. (2008). The impact of monetary policy on stock prices. *Journal of Policy Modeling, 30*(1), 33-53.

Jamaludin, N., Ismail, S., & Ab Manaf, S. (2017). Macroeconomic variables and stock market returns: Panel analysis from selected ASEAN countries. *International Journal of Economics and Financial Issues, 7*(1), 37-45.

Joseph, N.L. (2012), Modeling the impacts of interest rate and exchange rates on UK stock returns. *Derivatives Use Trading and Regulation, 7,* 306-323

Karki, D. (2018). Stock market responses to macroeconomic dynamics: testing for longrun equilibrium in Nepal. *Journal of Management,* 64-82

Keynes, J. M. 1936. The general theory of employment, interest and money. *Journal of Social Science, 7*(3), 38-52.

Khalid, W., & Khan, S. (2017). Effects of macroeconomic variables on the stock market volatility: the Pakistan experience. *International Journal of Econometrics and Financial Management, 5*(2), 42-59.

Khan, M. K. (2019). Impact of exchange rate on stock returns in Shenzhen stock exchange: Analysis through ARDL approach. *International Journal of economics and management, 1*(2), 15-26.

Khatri, M. (2019). Macroeconomic influence on the Nepalese stock market. *NRB Economic Review, 31*(1), 47-64.

Laichena, K. E., & Obwogi, T. N. (2015). Effects of macroeconomic variables on stock returns in the East African community stock exchange market. *International Journal of Education and Research, 3*(10), 27-39.

Malkiel, B. G. (1989). Is the stock market efficient? *A Journal of Science, 243*, 1313-1318.

Mgammal, M. H. (2018). The effect of inflation, interest rates and exchange rates on stock prices comparative study among two GCC countries. SSRN.

Mugambi, M. & Okech, T. C. (2016). Effect of macroeconomic variables on stock returns of listed commercial banks in Kenya. *International Journal of Economics, 4*(6), 390-418.

Mundell, R. (2010). Inflation and real interest. *Journal of Political Economy, 71*(3), 280283.

Naik, P. K. and Padhi, P. (2012). The impact of macroeconomic fundamentals on stock prices revisited. Evidence from Indian Data, *Eurasian Journal of Business and Economics, 5*(10), 25-44.

Özlen, S., & Ergun, U. (2012). Macroeconomic factors and stock returns. *International Journal of Academic Research in Business and Social Sciences, 2*(9), 315.

Panta, B. P. (2020). Macroeconomic determinants of stock market prices in Nepal. *Quest Journal of Management and Social Sciences, 2*(1), 64-79.

Parab, N., & Reddy, Y. V. (2020). The dynamics of macroeconomic variables in Indian stock market: a Bai–Perron approach. *Macroeconomics and Finance in Emerging Market Economies, 13*(1), 89-113.

Pudsaini, R. (2016). *Macroeconomic Variables Affecting the Stock Market.* An Unpublished Master's dissertation, Submitted to Central Department of Management, Tribhuvan University.

Rano, S. U., & Bayero, A. (2019). Does inflation have an impact on stock returns and volatility? *Journal of Evidence from Ghana, 3*, 1-17.

Ross, S.A. (1976). The arbitrage theory of capital pricing. *Journal of Economic Theory, 13*, 341-360.

Rostamy, A. A. (2013). Oil price, exchange rate, interest rate, and market return relationship with industries stock return: evidence from Iranian Stock Exchange. *Research and Applications in Economics, 1*(1), 114-137

Shrestha, P. K. & Pokhrel, S. (2019). Factor affecting stock index in Nepal. *SEBON Journal, 7*, 33-52.

Shrestha, P. K. & Subedi, B. R. (2014). Determinants of stock market performance in Nepal. *NRB Economic Review*, 26(2), 25-40.

Shrestha, P. M. (2019). Effect of macroeconomic variables on stock market index. *SEBON Journal, 7*, 95-107.

Suhadak, S., & Suciany, A. D. (2021). Brief Technical Note: The Influence of Exchange Rates on Inflation, Interest Rates and the Composite Stock Price Index: Indonesia 2015-2018. *Australasian Accounting, Business and Finance Journal*, *14*(1), 105-120.

Thapa, S. (2018). *Impact of Inflation and Exchange Rate on Stock market.* An Unpublished Master's dissertation, Submitted to Central Department of Management, Tribhuvan University.

Venkatraja, B. (2014). Impact of macroeconomic variables on stock market performance in India: an empirical analysis. *Economic and Applied Management Research, 1*(6), 48-73.

Yunita, Y., & Robiyanto, R. (2018). The Influence of Inflation Rate, Bi Rate, and Exchange Rate Changes To the Financial Sector Stock Price Index Return in the Indonesian Stock Market. *Journal Manajemen Dan Kewirausahaan, 20*(2), 80-86.

APPENDICES

Appendix I

Fiscal Year	GDP	Inflation rate	Interest rate	NEPSE
2023/24	40.91	5.44	3.02	2097.1
2022/23	41.18	7.74	3.61	2009.5
2021/22	36.92	6.32	3.66	2883.4
2020/21	33.43	3.6	4.72	1394.77
2019/20	34.19	6.15	4.97	1259.02
2018/19	33.11	4.64	3.74	1212.36
2017/18	28.97	4.15	5.28	1583.57
2016/17	24.52	4.45	4.12	1718.15
2015/16	24.36	9.94	3.9	961.23
2014/15	22.73	7.21	5.9	1036.11
2013/14	22.16	9.08	6.3	518.33
2012/13	21.7	9.84	4.1	389.74
2011/12	21.57	8.32	8.22	362.85
2010/11	16	9.56	6.57	477.73

Source: Essential Information from World Bank and Nepal Rastra bank

Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
GDP	14	16.00	41.18	28.6964	7.94347
Inflation rate	14	3.60	9.94	6.8886	2.23818
Interest rate	14	3.02	8.22	4.8650	1.44823
NEPSE	14	362.85	2883.40	1278.8471	738.58572
Valid N (listwise)	14				

Correlations Analysis

Variables		GDP	Inflation rate	Interest rate	NEPSE
GDP	Pearson Correlation	1	-.546*	-.679**	.805**
	Sig. (2-tailed)		.044	.008	.001
	N	14	14	14	14
Inflation rate	Pearson Correlation	-.546*	1	.321	-.576*
	Sig. (2-tailed)	.044		.263	.031
	N	14	14	14	14
Interest rate	Pearson Correlation	-.679**	.321	1	-.669**
	Sig. (2-tailed)	.008	.263		.009
	N	14	14	14	14
NEPSE	Pearson Correlation	.805**	-.576*	-.669**	1
	Sig. (2-tailed)	.001	.031	.009	
	N	14	14	14	14

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

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

Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.841a	.708	.620	455.31929

a. Predictors: (Constant), Interest rate, Inflation rate, GDP

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5018458.636	3	1672819.545	8.069	.005b
	Residual	2073156.604	10	207315.660		
	Total	7091615.240	13			

a. Dependent Variable: NEPSE

b. Predictors: (Constant), Interest rate, Inflation rate, GDP

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	977.612	1390.618		.703	.498
	GDP	48.582	24.547	.522	1.979	.076
	Inflation rate	-70.101	67.541	-.212	-1.038	.324
	Interest rate	-125.385	119.148	-.246	-1.052	.317

a. Dependent Variable: NEPSE

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