

IMPACT OF MACROECONOMIC INDICATORS ON NEPSE INDEX

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by

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Certification of Authorship

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled IMPACT OF MACROECONOMIC INDICATORS ON NEPSE INDEX. 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

Miss Sirjana Nyaupane has defended research proposal entitled IMPACT OF MACROECONOMIC INDICATORS ON NEPSE INDEX, 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 Asso. Prof. Dr. Kapil Khanal and submit the thesis for evaluation and viva voce examination.

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Abbreviations

BOD	:	Board of Directors
C.V.	:	Coefficient of Variation
D/Y	:	Dividend Yield
DPS	:	Dividend per Share
EPS	:	Earnings per Share
GDP	:	Gross Domestic Product
ICAN	:	Institute Of Chartered Accountants of Nepal
IPO	:	Initial Public Offering
LC	:	Letter Of Credit
MVPS	:	Market Value per Share
NEPSE	:	Nepal Stock Exchange
NRB	:	Nepal Rastra Bank
PER	:	Price Earnings
CRR	:	Cash Reserve Ratio
CAR	:	Capital Adequacy Ratio
ROC	:	Registrar of Companies
S.D.	:	Standard Deviation
SEB	:	Securities Exchange Board
SEC	:	Securities Exchange Centre

Abstract

"IMPACT OF MACROECONOMIC INDICATORS ON NEPSE INDEX" is the title of the study. Examining the effects of the money supply, GDP, interest rate, inflation rate, and foreign exchange rate on the NEPSE index is the goal of this study. Essentially, the macroeconomic variables are determined by both qualitative and quantitative aspects.

NEPSE is the dependent variable in this study, and the experiment factors include the money supply, GDP, interest rate, inflation rate, and foreign exchange rate. The secondary data was collected from the websites of NEPSE, SEBON, and the Ministry of Finance over a fifteen-year period (2007/08 to 2021/22). The data is analyzed and interpreted using SPSS version 23, with a descriptive and casual comparative study methodology. Correlation research shows that NEPSE has weak positive correlations with the money supply, interest rate, and foreign exchange reserve, while NEPSE and GDP have a weak negative link, suggesting a minor tendency for these variables to move in the same direction.

A multiple linear regression model has been used to show how independent variables affect NEPSE. The result demonstrates that, while having an adverse effect on NEPSE, the interest rate and inflation rate are not statistically significant. Similar to the last clue, the money supply and GDP both positively impact NEPSE; the money supply is not insignificant, but the GDP is statistically significant.

Key Words: NEPSE, GDP, Interest Rate, Inflation Rate, Foreign Exchange Rate

CHAPTER – I

INTRODUCTION

1.1 Background of the Study

In comparison to other neighboring countries, Nepal's economic progress over the past fifty years has not been particularly noteworthy. In the course of this time, Nepal has had several political changes. Following the return of democracy, the 1980s saw the continuation of the liberalized economic policies that had been in place. The nation carried out a number of significant liberal reforms during this ten-year period, including the deregulation of trade, industry, finance, and foreign exchange regimes; the simplification of price controls and subsidies; the privatization of important state-owned businesses; the significant reduction of trade-related tariffs; and policies concerning industry and foreign investment. However, political unrest brought on by the Maoist insurgency and numerous government changes after 1995 hindered the country's economic growth by delaying the execution and completion of some of the more challenging reforms (Phuyal, 2016).

Shares of publicly traded corporations are traded on the stock market as a whole. There are two venues for trade: the over-the-counter market, where shares of unlisted public firms are exchanged, and the secondary market, where shares of publicly traded companies listed on the Nepal Stock Exchange (NEPSE) are traded. Similar to this, there is another type of market called the primary or initial public offering (IPO) market where stocks are first traded (Joshi and Giri, 2015). The value of a stock, on the other hand, represents the present value of future cash flows or profits, but prices are arbitrary and set by supply and demand in the market. Nevertheless, a price or transaction value is necessary in order for a stock to be transacted (Carter et al., 2022).

The NEPSE index, a complex index derived from market capitalization and regarded as a representative measure of the Nepalese stock market, is used to evaluate the performance of the stock market. Generally speaking, it's also believed that the stock market reflects the state of the economy (Khatri, 2015).

Regarding residual claims, capital gains, and dividends, common stockholders are in a limbo. They have to take the most risk as a result. Both stock exchanges and over-the-

counter (OTC) markets trade common stocks. Only listed businesses' common stocks are traded on the Nepal Stock Exchange (NEPSE). In Nepal, the stock market has a relatively short history. In order to facilitate and encourage the expansion of the capital market, the Securities Exchange Center (SEC) was founded in 1976 (Saputra, 2022).

It is believed that the capital market serves as a gauge of an economy. Over the past ten years, there has been excessive volatility in Nepal's capital market, despite the macroeconomic variables developing in a favorable direction at a slower pace. This suggested that the capital market and macroeconomic variables in the Nepali economy might not be effectively synchronized. This circumstance raised the question of whether equilibrium linkages between the stock market and short- and long-term remittances could be described using macroeconomic variables such as money supply, prices, interest rates, and remittances in the Nepali economy. Therefore, in order to determine how effective the Nepali stock market was at raising the necessary capital for the economy, this article looked at the co-integration of the chosen six macroeconomic variables with the stock market returns (Sharma, 2011).

The stock market index is typically used as a gauge of the state of the economy. An increase in the stock index is typically interpreted favorably because it shows investors have faith in the economy's prospects. It encourages investment in the financial system. Still, there's always reason for alarm when the stock market index rises quickly. The stability of the financial system and the economy will eventually be threatened if the index continues to climb in an unjustifiable manner in light of the fundamentals.

Therefore, it is crucial that decision-makers monitor the growth of the stock market and be prepared to act appropriately when necessary to stop bubbles from forming and the market from collapsing. Understanding the relationship between the stock market index and the variables that affect it is essential for this. The stock market may be impacted by various factors. The stock market is impacted by any factors that affect a company's cash flows or the discount rate. However, the specific elements that influence how much will differ from nation to nation based on the size, makeup, and other features of the market and economy. (Monti, 2012).

1.2 Problem Statement

These kinds of issues were somewhat resolved with the establishment of NEPSE in 1993 A.D. However, one issue facing the Nepalese people is that they perceive stock investments to carry more risk than they actually do. This causes them to second-guess whether or not to make an investment, which in turn causes them to hoard money. As a result, neither investors nor the country's economy gain from this situation.

In comparison to other neighboring countries, Nepal's economic progress over the past fifty years has not been particularly noteworthy. In the course of this time, Nepal has had several political changes. Following the return of democracy, the 1980s saw the continuation of the liberalized economic policies that had been in place. The nation carried out a number of significant liberal reforms during this ten-year period, including the deregulation of trade, industry, finance, and foreign exchange regimes; the simplification of price controls and subsidies; the privatization of important state-owned businesses; the significant reduction of trade-related tariffs; and policies concerning industry and foreign investment. The stock exchange market provides a means of converting savings into investments by allowing the buying and selling of shares and securities issued by different corporations. These markets are critical to capital formation and mobilization, which in turn supports the expansion of trade, industry, the service sector, and commerce, so bolstering the nation's economy as a whole. Thus, the stock market has even been referred to be the economy's mirror (Ghimire & Mishra, 2018).

(Gurung et al., 2017) highlight the importance of stock markets in being able to raise investments for production and in business and for the overall economic development. Despite being a developing market with a relatively small market capitalization in comparison to other nations, NEPSE has been able to offer that platform to Nepalese investors and listed companies (Koirala & Bajracharya, 2004). People are increasingly aware that they can participate in the share markets, as evidenced by the general increase in the number of investors and the growth in the number of dematerialized accounts.

The Gross Domestic Product (GDP) growth rate of Nepal during the past few years has barely surpassed 5%. It was 5.60 percent in the fiscal year (FY) 2021–2022, and it was about 10 percent in the fiscal year 2015–16. However, over the past few years, the

inflation rate has hardly above 5%. NRB, Nepal Rastra Bank (2012). Between FYs 2019/20 and 2020/21, the Nepali financial industry had a severe liquidity crisis that drove interest rates to an all-time high. Indicators of the capital market demonstrated significant volatility during that time.

Sharpe (2002) examined stock valuation and inflation for the time period of 1965-2001 to check this he collects monthly historical annual operating income for S&P500 from I/B/E/S International. Two variables were shown to be responsible for the negative relationship between expected inflation and equity valuations: an increase in expected inflation is associated with both lower expected real profits growth and higher necessary real returns. The earnings channel primarily illustrates the inverse relationship between anticipated inflation and long-term earnings growth. Anticipated inflation has a significant impact on the necessary long-term real stock returns. After doing a basic regression, he came to the conclusion that there is a significant inverse link between inflation and stock returns.

Prior research, such as that conducted by Phuyal (2016) and Kumar (2019), has suggested a connection between elevated stock market price volatility and changes in macroeconomic variables. It is crucial to investigate any comparable correlations between the macroeconomic indicators and the Nepali stock market. This study's primary goal is to determine whether macroeconomic variables affect the dynamics of the Nepali stock market either separately or in combination.

The stock markets of emerging economies have experienced significant growth in recent decades, drawing the attention of investors worldwide. Previous research on the factors influencing stock return has mostly concentrated on established markets, paying less attention to developing countries. For the finance literature, empirical testing of the theory in emerging markets would be crucial. It is believed that the capital market serves as a gauge of an economy. Over the past ten years, there has been excessive volatility in Nepal's capital market, despite the macroeconomic variables developing in a favorable direction at a slower pace. This suggested that the capital market and macroeconomic variables in the Nepali economy might not be effectively synchronized. This circumstance raised the question of whether equilibrium linkages between the stock market and short- and long-term remittances could be described using macroeconomic

variables such as money supply, prices, interest rates, and remittances in the Nepali economy. As a result, the research addresses the following problems:

- i. What is the situation of foreign currency reserve, interest rate, inflation rate and money supply in NEPSE index?
- ii. What is the relationship between foreign currency reserve, interest rate, inflation rate and money supply of NEPSE index?
- iii. What is the impact of foreign currency, interest rate, inflation rate and money supply on NEPSE index?

1.3 Objectives of the Study

Finding the factors impacting the market share price of insurance companies in Nepal is the main goal of this thesis. The following is a list of the study's particular goals:

- i. To examine the existing position of foreign currency reserve, interest rate, inflation rate and money supply in NEPSE index.
- ii. To investigate the relationship between foreign exchange rate, GDP, interest rate, inflation rate, money supply and NEPSE index.
- iii. To analyze the effect of foreign currency reserve, interest rate, inflation rate and money supply on NEPSE index.

1.4 Rationale of the Study

This study focuses on the factors that influence macroeconomic indicators. Investors can make informed decisions about purchasing shares of insurance businesses based on this information. Companies can also increase or decrease the corresponding variables to raise the market price of their stock. Strong business and extensive market penetration are the results. In the end, it results in a prosperous corporation with happy shareholders and allows all kinds of investors, regardless of their financial capabilities, to invest freely and risk-free.

This research contributes to the growth and advancement of the share market and boosts the country's overall economy. The report offers suggestions for reducing stock investment risk as well as basic knowledge about the Nepalese stock market. A topic of interest for academics, students, researchers, teachers, and those working in the finance industry outside of this study.

This study has sought to analyze the internal financial elements that affect share price in order to provide both current and potential investors with accurate images of the sample companies so they can make wise investment decisions. In a similar vein, this assignment might serve as a roadmap for interested parties and future study.

The study is beneficial to those who are interested in learning more about the NEPSE index's impact from signaling variables, the volume of stocks traded, the price trend of stocks, and the listing of new firms in the secondary market. In order to improve the efficiency of the share market, the study also benefits issue managers, stock brokers, securities dealers, market makers, and legislators.

1.5 Limitations of the Study

Even if the study's conclusions were reached with great care, there are still several limitations that need be taken into account for a trustworthy interpretation of the data. The following are the study's main limitations:

- There are many macroeconomic variables; Out of them, only six variables are taken in the study i.e. foreign exchange rate, GDP, interest rate, inflation rate, remittance and NEPSE index, so that research outcome change.
- The whole study is based upon the analysis of foreign exchange rate, GDP, interest rate, inflation rate, remittance and NEPSE index while others are ignored which might affects NEPSE index.
- The study is based on secondary data taken from NEPSE, SEBON and NRB website and other sources with time period of 10 years starting from 2012/13 to 2021/22.
- This study uses statistical tools i.e. regression, correlation and descriptive statistics only which may not cover the whole.
- The data are collected from NEPSE, SEBON, NRB, and Ministry of Finance (MOF).

CHAPTER - II

LITERATURE REVIEW

A literature review is an analysis of research papers or other pertinent statements in the relevant field of study in order to gather information on all prior studies, their conclusions, and any shortcomings so that additional research may be carried out. It is an essential and required procedure for research projects. It is an essential component of every dissertation. Stated differently, the findings are grounded on a solid theoretical framework and are directed towards the exploration of relationships through experiential learning, resonating, and empirical study. Finding out what has already been discovered is helpful. Reviewing pertinent literature entails putting new lenses on old eyes to see the world in a different light by posing the issue using updated data and information and observing the outcomes. Literature serves as a primary source of knowledge, assisting researchers in determining what has already been studied and what needs to be done in their field of interest.

2.1 Theoretical Review

2.1.1 Efficient Market Theory (EMT)

One hypothesis that describes the evolution of the capital market is the Efficient Markets hypothesis (EMT). Fama established this idea in 1965, and Hodnett and Hsieh (2012), Ewahetal (2009), and others have used it. According to this statement, the price of an asset represents all pertinent data that is currently accessible regarding the asset's intrinsic worth, also referred to as the present value of the cash flows that the security's owner anticipates receiving. Nonetheless, investors are driven to trade and drive stock prices toward the present value of future cash flows by the profit opportunities given by the existence of overvalued and undervalued firms. Once more, Fama E. (1991) made the point that market efficiency is a continuum, with the more efficient a market is, the lower its transaction costs, including the cost of trading and acquiring information.

There are two reasons why stock price informational efficiency matters. Investors are primarily concerned with whether different trading techniques can outperform the market and generate extra returns. Second, the capital market develops more if stock prices fairly represent all available information and new investment money is put to its highest-valued use. Three distinct forms of market efficiency—weak form, semi-strong form, and strong

form—were also discussed by the author. Any variation of the efficient market theory has the capacity to rule out the possibility of a consistent outperformance by a certain investor group using a particular kind of information as a trading instrument. On the other hand, assuming efficient capital markets, all investors take a low risk approach and make logical decisions.

2.1.2 Capital Asset Pricing Theory (CAPT)

The Capital Asset Pricing Theory, or CAPM as it is commonly known, is the particular equilibrium model that piques the curiosity of several investors. Asset pricing theory originated with William Sharpe's (1964) and John Linter's (1965) CAPM, which earned Sharpe a Nobel Prize in 1990. The strength and intuitive appeal of the CAPM's forecasts regarding risk measurement and the relationship between projected return and risk are what draw people in. It enables users to evaluate the pertinent risk of specific stocks and the correlation between risk and anticipated investment returns. Because of its implications and simplicity, the CAPM is a desirable equilibrium model. But over time, significant problems with the model have led to the development of substitutes. The main substitute for the Capital Asset Pricing Model (CAPM) is the Arbitrage Pricing Theory (APT), which permits many sources of risk. Despite being a straightforward model with a solid foundation in logic, the CAPM has a number of implausible assumptions. A few modifications to the fundamental CAPM that eased one or more of these presumptions were put out (Black, 1972). Keep in mind that you can never completely eliminate risk in investing, no matter how diverse your portfolio is.

2.1.3 Capital Market Theory

Following Markowitz's contemporary portfolio theory, capital market theory examined the effects of introducing a risk-free asset. The CAPM is commonly attributed to Sharpe, however comparable models were independently developed in the mid-1960s by Lintner and Mossin. The following are some of the presumptions made about capital market theory: investors can borrow or lend any amount at a risk-free rate of interest; all investors have homogeneous expectations for returns; and all investors are Markowitz efficient investors who select investments based on expected return and risk. A model called capital market theory aims to value assets, most frequently shares. Capital market theory establishes the framework for doing securities analysis. Unlike modern portfolio

theory (MPT), which posits how investors should behave, capital market theory is a positive theory that posits how investors actually behave.

2.1.4 Fama-French Three-Factor Model

Developed in 1992, the Fama and French Three-Factor Model, often known as the Fama French Model, is an asset pricing model that builds upon the capital asset pricing model (CAPM) by include size and value risk elements in addition to the market risk factor. This model takes into account the fact that small-cap and value stocks frequently beat the market. The model accounts for this tendency to outperform by adding these two extra variables, which is supposed to improve the model's usefulness as a manager performance assessment tool. By supplementing the market risk elements with size and value risk components, the Fama French 3-factor model is an asset pricing model that builds upon the capital asset pricing model.

Three components make up the Fama and French model: book-to-market values, excess return on the market, and business size. Stated differently, the three parameters that are considered are the return on the portfolio less the risk-free rate of return, small minus big (SMB), and high minus low (HML). HML accounts for value equities with high book-to-market ratios that outperform the market, whereas SMB accounts for publicly traded companies with smaller market caps that produce higher returns.

Developed by Eugene Fama and Kenneth French, this model adds to the CAPM by include more variables that affect stock returns. Market risk, size (the company's size), and value (the ratio of a company's book value to its market value) are the three components of this model. Using this approach, the performance of mutual funds may be assessed by comparing their results to these parameters.

2.1.5 Style Box Theory

An illustration of the investment style of a mutual fund is provided by the style box hypothesis. Funds are sorted into nine groups according to their investment goals and the kinds of securities they own. Dimensions such market capitalization (big, medium, or small) and investment style (value, growth, or blend) are usually included in the style

box. This hypothesis aids investors in comprehending a mutual fund's features and investment approach fast.

2.1.6 Darvas Box Theory

Nicolas Darvas devised the Darvas box theory, a trading strategy that uses volume and highs as crucial indicators to identify companies. Investing in equities that are hitting new highs and drawing a box around the recent highs and lows to determine an entry point and stop-loss order placement are key components of Darvas' trading strategy. When price movement breaks above the previous high but returns to a price that is not far from that high, the stock is said to be in a Darvas box. Since the Darvas box theory is not restricted to any particular time frame, the boxes are made by the trader by drawing a line over the recent highs and lows of the timeframe they are employing. A technical approach called Darvas box theory enables traders to pick equities with rising transaction volume. The Darvas box hypothesis is most effective when applied to rising markets and/or bullish industry sectors.

2.1.7 The Pricing Decision Theory

Determining the best price for a good or service is referred to as pricing decision theory. To make well-informed price decisions, a variety of elements must be analyzed and economic concepts must be applied. The following are some essential ideas and theories in pricing decision theory:

- **Supply and Demand:** Pricing decisions are based on the fundamentals of supply and demand. Prices usually increase when there is a high demand for a good or service and a limited supply. On the other hand, if supply outpaces demand, it can be necessary to reduce prices in order to boost sales.
- **Price Elasticity:** The degree to which the amount demanded is responsive to price fluctuations is gauged by price elasticity of demand. A little change in price will cause a correspondingly bigger change in the quantity required if demand is elastic. On the other hand, price changes have a comparatively less effect on quantity required if demand is inelastic. Determining how price adjustments may impact sales revenue requires an understanding of price elasticity.
- **Cost-Based Pricing:** This method of setting prices takes into account the intended profit margin in addition to production and operating expenses. Various cost-based pricing techniques include target return pricing, which attempts to get a

particular return on investment, and cost-plus pricing, which adds a markup to the cost of manufacturing.

- **Market-Based Pricing:** This approach bases prices on the state of the market, the level of competition, and the perceived value of the product by the client. Market-based pricing approaches include pricing tactics include price skimming, which sets high beginning prices to maximize revenue from early adopters, and penetration pricing, which sets low initial prices to gain market share.
- **Psychological Pricing:** This approach considers the psychological aspects that affect how consumers perceive prices. Techniques like prestige pricing—which involves setting high costs to evoke feelings of exclusivity or luxury—and charm pricing—which involves setting prices slightly below whole numbers, such as \$9.99 instead of \$10—are used to sway consumer behavior.
- **Dynamic Pricing:** Dynamic pricing is modifying prices in real-time in response to shifting demand, market conditions, and other variables. In sectors where rates can change depending on the time of day, season, or clientele, such hospitality, e-commerce, and transportation, this strategy is frequently employed.

2.1.8 Arbitrage Pricing Theory (1976)

There are two versions of the APT: factor loading model and macro variable model.

While the macro variable model uses macroeconomic variables based on the economically interpretable effect on stock prices, the factor loading model uses artificial variables produced by the factor analysis technique (Erdugan, 2012).

- The APT was created by Ross in 1976, and Roll and Ross (1995) explored its benefits for portfolio management and offered a clearer explanation of the concept.
- An alternate method to the CAPM, the APT is now the primary analytical instrument used to explain the occurrences seen in the capital markets.
- Using a linear combination of variables, it forecasts a link between the returns of a portfolio and the returns of a particular asset.
- via utilizing "pricing by arbitrage" to the utmost degree, the APT strategy departed from the risk vs return rationale of the CAPM.

- The basic logic and approach of almost all finance theory is arbitrage-theoretic reasoning, as stated by Ross (1976), and is not specific to his particular theory. While it was observed that both APT variants performed significantly better than the CAPM, there was no clear winner when it came to within- and out-of-sample explanatory power.
- To determine the number of factors and their importance in assessing the responsiveness of individual securities to various systematic risk variables, the factor loading model employs a factor analysis technique based on artificial factors.

2.2 Empirical Review

2.2.1 Review of International Articles

Paterson et al. (2023) investigated on The Impact of Government Policy Responses to the COVID-19 Pandemic and Brexit on the UK Financial Market: A Behavioral Perspective. During the peak of the COVID-19 pandemic in the UK, the Governor of the Bank of England stated in an interview that the bank could resort to drastic money-printing measures and that the pandemic was an unprecedented economic emergency. In response, the UK financial market saw record-breaking losses, especially for the FTSE 100 and the pound sterling. In light of this data, we postulated that investors' perceptions of the financial market and their feelings about it may have been influenced by the information they learned from regular announcements of government policy. Additionally, we suggested that as investors started to diversify their portfolios, the pandemic and the UK's eventual exit from the European Union (Brexit) may have deteriorated the outlook for the UK financial market. Thus, we looked at how government policy announcements affected investors' responses to the COVID-19 outbreak and Brexit at the same time. Our data show that regular policy announcements during the epidemic had a major impact on investor psychology, which in turn influenced overall market behavior.

Akter and Rahman (2023) conducted a research on Capital Market and its Prospects and Problems in Bangladesh. Proposals for new policies have been made to infuse the market with additional vigor and use it as a tool for the government's priority quick economic development. Since then, the market has remained erratic. The market has shown near-

constant growth in recent years. The nation's capital market is nevertheless beset by problems such as inadequate financial depth, a lack of diversity in products, inconsistent legal and regulatory frameworks, and other comparable concerns, even with the numerous advancements achieved over the years. This paper emphasizes the market's potential despite its numerous internal and external barriers. A robust capital market may be essential to the nation's whole financial system. The capital market of Bangladesh is significantly less developed than the markets of many other countries, particularly its neighbors. Bangladesh's capital market received a revitalization in 1976.

Goldstein (2023) conducted a research information in financial markets and its real effects. The goal of empirical research is to pinpoint the informative feedback that markets provide on business decisions. The consequences of this feedback effect for financial market equilibrium and economic efficiency are examined theoretically. The Fin Tech revolution's current information technology developments alter how financial markets handle information, which could alter the nature of the feedback effect. In this essay, I examine the key ideas in this body of work that is still under development and relate them to the ongoing information revolution. I also talk about potential research directions.

Nguyen (2023) conducted a research on the development of green bond in developing countries: insights from south east Asia market Participants. The idea of a green bond is new in Southeast Asia, owing to its growing significance as the primary funding source for the Sustainable Development Goals. Furthermore, the global development of green bonds has been disrupted by the concurrent Covid-19 pandemic. The present state of the green bond's development in Southeast Asian nations is examined in this study. 32 semi-structured interviews with participants in the capital markets of Southeast Asian nations were conducted. The findings point to potential obstacles, opportunities, challenges with regulations, and anticipated expansion in the green bond market. In order to generalize the research's findings, a number of hypotheses are presented in the study's conclusion and can be tested in the future. As a result, we increase our understanding of green bonds in Southeast Asian financial markets, which has implications for practitioners and decision-makers in the region regarding the growth of green bonds.

Majeed (2022) *The Effect of Macroeconomic Variables on Stock Exchange Market Performance: Iraq Stock Exchange Market as an Example*. This study aims to investigate how the performance of the Iraqi stock market is affected by monthly time series data of macroeconomic indicators from January 2005 to October 2021. Regression analysis is used in the investigation. There is a long-term association between long-term macroeconomic indicators and stock market performance, according to analysis. The money supply, exchange rate, and interest rate are the real factors that determine the success of the Iraqi stock market because they all have a significant impact.

Suhendra and Malini (2022) *the impact of macroeconomic variable toward Indonesia composite stock price index*. The purpose of this research is to ascertain how the Dow Jones Index, interest rates, exchange rates, and inflation affect the Composite Stock Price Index (CSPI), which is traded on the Indonesia Stock Exchange. The multiple linear regression analysis approach was the analytical technique employed in this study. The study's findings show that the Dow Jones Index, interest rates, exchange rates, and inflation all significantly affect the CSPI on the Indonesia Stock Exchange at the same time. The partial test's findings demonstrate that the Dow Jones Index, interest rates, and inflation all significantly and favorably affect the CSPI. Conversely, the CSPI is significantly and negatively impacted by the exchange rate. Investors and prospective investors may find use for the study's findings.

Carter et al. (2022) conducted a research on the stock price reaction of the COVID-19 pandemic on the airline, hotel, and tourism industries. This study examines the stock market performance of US travel-related companies (hotels, restaurants, and airlines) between the second half of February and the latter part of March 2020 in reaction to the COVID-19 pandemic. The travel industry undoubtedly suffered from the decline in travel, but our attention is drawn to the methods by which market players priced the news into stock prices. Larger companies with larger cash reserves and higher market-to-book ratios showed less negative returns, but larger companies were punished more. Furthermore, we discover that cash reserves were especially crucial for lodging establishments.

Saputra (2022) conducted a research on *Analysis of Total Debt, Revenue and Net Profit on Stock Prices of Foods And Beverages Companies on the Indonesia Stock Exchange*

(IDX) Period 2018-2021. The purpose of this study is to identify the variables influencing the 2018–2021 stock prices of food and beverage companies listed on the Indonesia Stock Exchange. The dependent variable under investigation was stock price, whereas the independent variables under investigation were total debt, revenue, and net profit. Twenty food and beverage firms that are listed on the Indonesia Stock Exchange were found for this study. To obtain a sample of ten food and beverage companies, simple random sampling is the sampling approach utilized. The study employed quantitative descriptive statistics as its research methodology. The T-test, F test for coefficient of determination, multiple linear regression analysis, and the classical assumption test were the tests that were employed. On the Indonesia Stock Exchange website, financial statement data for the company for the years 2018–2021 could be found. The data was subsequently processed by the IBM application, according to the research's associated company website. 27 SPSS. The study's combined F test results indicate that Net Profit, Total Debt, and Income all have an impact on stock prices. In contrast, the T-test reveals that Earnings Net has a substantial impact on stock prices, Total Debt has no significant impact on stock prices, and Income has no impact at all.

Li and Pan (2022) researched on A novel ensemble deep learning model for stock prediction based on stock prices and news. Machine learning and deep learning have gained popularity recently as techniques for analyzing financial data, which includes numerical, graphical, and textual financial data. Projecting future stock values is one of the most well-liked and intricate deep learning subjects in finance. The challenge with predicting future stock prices is the sheer number of variables that might simultaneously impact the amplitude and frequency of stock price fluctuations. A few company-specific elements that may have an impact on the share price include earnings and profit announcements, projected future earnings, dividend announcements, the launch of a new product or a recall of an existing one, landing a big contract, staff layoffs, a significant management transition, an impending acquisition or merger, and accounting mishaps or scandals. Moreover, these elements are specific to the company; other factors, such as industry performance, investor attitude, and economic conditions, will also influence the future trajectory of equities.

This research suggests a revolutionary deep learning method for stock movement prediction in the future. The model combines two recurrent neural networks with a fully

connected neural network using blending ensemble learning. We employ the S&P 500 Index as our test case in this study. By using the same dataset, our experiments demonstrate that our blending ensemble deep learning model performs significantly better than the best current prediction model. It achieves a 57.55% reduction in mean-squared error, increasing precision rate by 40%, recall by 50%, F1-score by 44.78%, and movement direction accuracy by 33.34%. This paper aims to elucidate our design philosophy and demonstrate how ensemble deep learning technologies can, in comparison to other conventional methods, actually forecast future stock price patterns more successfully and help investors make better investment decisions.

Putra et al. (2021) the effect of macro-economic indicators on share prices in the construction sub-sector and building companies listed in Indonesia stock exchange 2013-2018. This study aims to ascertain how world oil prices, inflation, exchange rates, and stock prices affect each other. techniques for panel data regression that make use of a random effect model (RE) for data analysis. The findings demonstrated the relationship between global oil prices and inflation and stock prices. In the meantime, the stock price is unaffected by the exchange rate.

Huy et al. (2021) Impacts of internal and external macroeconomic factors on firm stock price in an expansion econometric model- A case in Vietnam real estate industry. The purpose of this essay is to examine how macroeconomic variables, including exchange rates, inflation, GDP growth rates, and risk-free rates in Vietnam, affect stock prices. Regression analysis is used. This study reveals that the VIC stock price has a positive association with the lending rate in Vietnam but a negative correlation with the risk-free rate and deposit rate of commercial banks in Vietnam.

Norehan and Ridzuan (2020) researched on the impact of macroeconomics variables toward stock market in Malaysia. Using annual data, this study examined the effects of macroeconomic variables on the Malaysian stock market from 1981 to 2017. Autoregressive Distributed Lag (ARDL) was used in the study. The results based on long-run elasticity show that the exchange rate and inflation have a major and favorable impact on the Malaysian stock market. On the other hand, wide money and domestic saving have a long-term detrimental effect on the stock market.

Khan and Khan (2018) published an article on the impact of macroeconomic variables on stock prices: A case study of Karachi Stock Exchange. The study makes a contribution by evaluating monthly data from May 2000 to August 2016 in order to ascertain the impact of key macroeconomic variables on Pakistani stock prices. The ideal ARDL approach of bound testing is used to verify the short- and long-term co-integration of the macroeconomic factors on stock prices because all the variables are stationary at initial difference. The results imply that the money supply, currency rate, and interest rate have a substantial long-term impact on Karachi Stock currency stock prices. With the exception of the currency rate, which has a negative co-integration with stock prices, all the variables are negligible in the short run. When altering the money supply, the central bank must exercise caution since an excessive rise could have an impact on the stock market and investment markets. In order to promote economic activity, enhance the external economic environment through rule-based exchange rate management, and refrain from taking arbitrary action, the regulator should maintain interest rates at a reasonably low level.

Ndegwa (2016) researched on the effect of macro-economic variables on stock market return at the Nairobi Securities Exchange. The goal of the study was to determine how macroeconomic factors affected NSE stock returns. The money supply (M2), the US dollar exchange rate, and the CBK lending rate were the macroeconomic variables that were used in the research. The analysis made use of monthly secondary data from July 2011 to June 2016 that was obtained from the NSE and the Central Bank of Kenya. According to the study's findings, 15.7% of the macroeconomic variables that were chosen for analysis had a marginally positive impact on NSE stock returns. The money supply was shown to have a negative impact on the CBK lending rate, while the money supply had a positive impact on the exchange rate. Exchange rate Granger Causes stock market returns, according to the Granger Causality test. Granger Cause money supply and CBK lending rate were also found to be influenced by the exchange rate. Other macroeconomic variables not covered in this study, such as GDP, inflation, the consumer price index, and so on, should be added in future research. A longer study period should also be used to establish the impact of Kenya's new system of governance.

Ouma and Muriu (2014) conducted a research on The impact of macroeconomic variables on stock market returns in Kenya. This research uses monthly data from the Capital Asset

Pricing Model (CAPM) and Arbitrage Pricing Theory (APT) to examine how macroeconomic factors affected stock returns in Kenya from 2003 to 2013. The model's validity and the relative weights of various variables that could affect stock returns are assessed using the Ordinary Least Square (OLS) technique. Two intriguing findings emerged from the empirical investigation. For starters, every variable is $I(0)$. Second, there is a strong correlation between macroeconomic indicators and stock market performance, apart from interest rates. The study's conclusions indicate that inflation, money supply, and currency rates have an impact on Kenya's stock market results. It is discovered that inflation and the money supply have a major influence on NSE returns. However, it has been discovered that exchange rates negatively affect stock returns, whereas interest rates have no bearing on the NSE's long-term results.

Table 1

Summary of International Article

Author s/ Year	Title	Main Objectives	Research Method ology	Findings
Goldstein (2023)	The information in financial markets and its real effects	To identify the informational feedback from corporate decisions	Primary data were used to analysis the study.	According to this study, the former kind of funds have the ability to follow a greater number of equities and stocks about which more information is available.
Nguyen (2023)	The development of green bond in developing countries: insights from south east Asia market Participants	To explores the current development status of the green bond in Southeast Asian countries	Research adopts the qualitative approach.	Businesses must set up an issuing method, which includes extra work with stakeholders and government agencies, a managerial system, and reporting procedures, before they can issue green bonds. For GB issuance, each of these processes resulted in financial

Patero n, et. al (2023)	The Impact of Government Policy Responses to the COVID-19 Pandemic and Brexit on the UK Financial Market: A Behavioral Perspective	To examine the impact of government's policy announcements on investors' reactions to the concurrence of the COVID-19 pandemic and Brexit	Uses of Regressi on analysis: OLS Method	expenses. Our data show that regular policy announcements during the epidemic had a major impact on investor psychology, which in turn influenced overall market behavior.
Akter and Rahma n (2023)	Capital Market and its Prospects and Problems in Bangladesh	to inject the market with more energy, making it an instrument of the rapid economic development the government has prioritized	Autocor relation, and regressi on analysis	Less investment in real sectors was made possible by the slowdown in exports and imports brought on by the global recession, which created the perfect environment for excess cash to be placed in stocks. Because of this, the DSE was breaking record after record, while the actual economy was expected to grow at its slowest rate in eight years.
Suhen dra and Malini (2022)	The impact of macro-economic variable toward Indonesia composite stock price index.	To determine the effect of Inflation, Interest Rates, Exchange Rates, and the Dow Jones Index on The Composite Stock Price Index (CSPI)	Multipl e linear regressi on analysis method	The study's findings show that the Dow Jones Index, interest rates, exchange rates, and inflation all significantly affect the CSPI on the Indonesia Stock Exchange at the same time. The partial test's findings demonstrate that the Dow Jones Index, interest rates, and inflation all

		listed on the Indonesia Stock Exchange.		significantly and favorably affect the CSPI. Conversely, the CSPI is significantly and negatively impacted by the exchange rate. Investors and prospective investors may find use for the study's findings.
Majeed (2022)	The Effect of Macroeconomic Variables on Stock Exchange Market Performance: Iraq Stock Exchange Market as an Example	To examine the impact of monthly time series data of macroeconomic variables from January 2005 to October 2021 on Iraqi's stock market performance.	Regression analysis	There is a long-term association between long-term macroeconomic indicators and stock market performance, according to analysis. The money supply, exchange rate, and interest rate are the real factors that determine the success of the Iraqi stock market because they all have a significant impact.
Huy, Loan and Anh (2021)	impact of selected factors on stock price: a case study of Vietcom bank in Vietnam	To analyze and evaluate the impacts of seven macroeconomic factors on stock price of a joint stock commercial bank	Regression analysis	Quantitative research findings in a seven-factor model demonstrate that rising GDP growth, lending rates, and risk-free rates have a major impact on rising VCB stock prices, with the largest impact coefficients going to rising GDP growth and declining exchange rates coming in second and third, respectively, and a minor decline in the S&P 500 coming in last.

				Many developing nations' commercial bank systems might utilize the research findings and suggested policy as a guide for creating their own policies.
Huy, Nhan, Bich, Hong, Chung & Huy (2021)	Impacts of internal and external macroeconomic factors on firm stock price in an expansion econometric model—a case in Vietnam real estate industry.	To consider the interaction between macro-economic factors such as Viet Nam inflation and GDP growth rate, inflation, exchange rate, risk free rate on stock price.	Regression analysis	This study reveals that the VIC stock price has a positive association with the lending rate in Vietnam but a negative correlation with the risk-free rate and deposit rate of commercial banks in Vietnam.
Putra, Wiyud a, Halim (2021)	The effect of macro-economic indicators on share prices in the construction and building companies listed in Indonesia stock exchange 2013-2018	To determine the effect of exchange rates, inflation, world oil prices, and exchange rates on stock Price.	Panel data regression method using a random effect model (RE).	The findings demonstrated the relationship between global oil prices and inflation and stock prices. In the meantime, the stock price is unaffected by the exchange rate.
Noreh an, Ridzuan	The Impact of Macroeconomic Variables toward Stock	This paper investigated the impact of macroeconomic	The study implemented	The results based on long-run elasticity show that the exchange rate and inflation have a major and favorable

(2020)	Market in Malaysia.	in variables in the stock market in Malaysia from the period 1981 to 2017 using annual data.	Autoregressive Distributed Lag (ARDL)	impact on the Malaysian stock market. On the other hand, wide money and domestic saving have a long-term detrimental effect on the stock market.
Ilhan & Akdeniz(2020)	The impact of macroeconomic variables on the stock market in the time of covid-19: the case of Turkey	To understand the effects of the COVID-19 pandemic on economies through various simulations and forecasts,	Regression analysis -Least Squares method	Based on the quantitative size of the coefficients, it was concluded that the macroeconomic variable that had the biggest effect on BIST 100 was the exchange rate.
Assagaf, Murwaningsari, Gunaawan & Mayangsari (2019)	The effect of macro-economic variables on stock return of companies that listed in Exchange: Empirical evidence from Indonesia	This study aims to analysis the effect of macroeconomic variables on the overall return of company shares which is a proxy with changes in the composite stock price index.	This study uses secondary data While the analysis technique uses multiple linear regression	According to this study, companies listed on the Indonesia Stock Exchange are significantly impacted by macroeconomic factors such as foreign exchange rates, interest rates, money supply, and rates of inflation and stock returns.
Khan and Khan	The Impact of Macroeconomic Variables on	To analyze the effect of various macroeconomic	Time series Data	The results imply that the money supply, currency rate, and interest rate have a

(2018)	Stock Prices: A Case Study of Karachi Stock Exchange	A variables on stock prices of Pakistan	on with the Regress ion analysis	with substantial long-term impact on Karachi Stock currency stock prices. With the exception of the currency rate, which has a negative co-integration with stock prices, all the variables are negligible in the short run.
NDEG WA (2016)	The effect of macro-economic variables on stock market return at the Nairobi securities exchange	The study sought to establish the effect of macroeconomic variables on stock returns at the NSE.	Regress ion analysis	According to the study's findings, 15.7% of the macroeconomic variables that were chosen for analysis had a marginally positive impact on NSE stock returns.
Ouma and Muriu (2014)	the impact of macroeconomic variables on stock market returns in Kenya	This study investigates the impact of the macroeconomic variables on stock returns in Kenya	The Ordinary Least Square (OLS) technique is applied	The study's conclusions indicate that inflation, money supply, and currency rates have an impact on Kenya's stock market results. It is discovered that inflation and the money supply have a major influence on NSE returns. However, it has been discovered that exchange rates negatively affect stock returns, whereas interest rates have no bearing on the NSE's long-term results.

2.2.2 Review of Nepalese Articles

Vaidya, Sharma, and Dangol in (2023) conducted on a qualitative analysis of opinions on the distribution nature of NEPSE return. The study carried out a qualitative investigation of the views of Nepalese investors on the investment climate of the Nepalese stock market (NEPSE) and the difficulties they have encountered when making investment decisions. The respondents' perspectives on the NEPSE screening procedure and the market's return distribution structure were also obtained by the paper. In order to derive specific ideas from the opinions, the paper employed grounded theory. The study discovered that the respondents were concerned about the listed companies' solid foundations. Similarly, respondents expressed concern about inaccurate information and trading practices. Based on interviews, the article discovered that investors in Nepal were able to create a better portfolio by screening shares using the publicly available financial reports of the listed companies. Lastly, the majority of interviewers believed that the NEPSE return followed a normal distribution given its distributional nature. According to the respondents, if the bull run continues, the market return will follow a power-law due to the nation's ideal political and economic conditions, as well as the extraordinary volume of commerce. They also made a connection between the behavioral aspects of the investment decision-making process and the type of return distribution.

Maskey (2023) investigated on specific determinants of share prices: a case study of listed life insurance companies in Nepal Stock Exchange. The purpose of this research is to look into the variables influencing the market share prices of life insurance businesses that are listed on the Nepal Stock Exchange (NEPSE). A sample of all life insurance companies listed on the Nepal Stock Exchange with panel data from 2012/13 to 2017/18 was used for the research. Descriptive and inferential statistics were used to evaluate the data, and regression coefficients based on the multiple regression model's findings were used to test the hypothesis in this study. The study found that the main factors influencing share price are dividend yield, age of the company, price-earnings ratio, earning per share, and dividend yield. The study finds that when Nepalese investors make investments, dividends are a significant factor. Furthermore, it was discovered that the companies' dividend policies significantly influence investor choices in Nepal.

Pokhrel et al. (2022) published an article on predicting NEPSE index price using deep learning models. In order to predict the closing price of the Nepal Stock Exchange

(NEPSE) index the next day, this study compares three deep learning models: the Long Short-term Memory (LSTM), Gated Recurrent Unit (GRU), and Convolutional Neural Network (CNN). Within the categories of fundamental market data, macroeconomic data, technical indicators, and financial text data of the Nepalese stock market, a well selected set of sixteen predictors is included. The common evaluation metrics—Correlation Coefficient (R), Mean Absolute Percentage Error (MAPE), and Root Mean Square Error (RMSE)—are used to compare the performances of the models in use. The experimental findings demonstrate that the high prediction accuracy and superior fit of the LSTM model architecture. Additionally, statistical proof is shown to support the robustness and dependability of the models.

Shrestha (2022) examined the effect of macroeconomic variables on Stock market Index with reference to Nepal stock exchange. Examining the impact of macroeconomic factors on Nepal's stock market index was the study's goal. From January 2002 to December 2016, monthly data were collected utilizing OLS regression techniques in multivariate regression analysis. The study came to the conclusion that, in the Nepalese stock market, the interest rate and wholesale price index had a bigger impact on the stock market index than did the exchange rate and gold price, and that they also had a greater explanatory power for explaining variations in the stock market index.

Thapa (2021) investigated the influencing factors of stock price in Nepal. This study examined the variables that affected Nepalese stock prices from 2008 to 2018 AD with regard to Nepalese commercial banks that were listed on the Nepal Stock Exchange Ltd. A basic linear regression model was used to examine the data that was gathered from the financial statements and questionnaires of the relevant organizations. The study's findings demonstrated that while interest rate (IR) and price to earnings ratio (PER) demonstrated a significant inverse association with share price, earning per share (EPS), dividend per share (DPS), effective rules and regulations, market whims and rumors, company profiles, and success depend on luck and positive association with share price. The study discovered that changes in interest rates and dividends in Nepal had a major impact on the stock market.

Devkota and Panta (2020) The study examined the causal relationship between the Nepalese stock exchange (stock market index) and interest rate, gold price, exchange rate

in Nepal. The January 2006–June 2018 monthly time series data were used. The unit root test and Johansen's Co-integration test are used to diagnose the time series aspects of the data. Additionally, the direction of causation to the short- and long-term correlations between the variables was discovered by the Granger causality test, which was based on the Vector Error Correction Model (VECM). Devkota and Panta discovered a unidirectional causal relationship between the gold price and the interest rate as well as a feedback relationship between the stock market index and the interest rate. Throughout the study period, there was a unidirectional causal relationship between the stock market index and exchange rates.

Shrestha & Subedi (2020) studied the determinants of stock index in Nepal using monthly data for the period of mid-August 2000 to mid-July 2014. The Treasury bill rate, wide money, and consumer price index were selected as the macroeconomic variables. The results of the correlation research demonstrated that there is a substantial association between macro factors and the stock market index. According to the findings, the stock market index reacts adversely to the rate of treasury bills and positively to inflation and the growth of broad money. Shareholders in Nepal should think of stocks as an alternative financial instrument and use them as a hedge against inflation, according to Shrestha and Subedi. Additionally, the decreased cost of borrowing encourages investment in the Nepalese stock market. The study also discovered that the stock market reacts strongly to shifts in the political landscape and the NRB's policy.

2.3 Research Gap

This literature evaluation allows for the deduction of various important conclusions. Firstly, current theories suggest a relationship between macroeconomic variables and stock markets, but they don't say what kind of macroeconomic components to include or how many to include. Consequently, the empirical research that has already been done—as this chapter reviews—has demonstrated the application of a wide range of macroeconomic variables to investigate their impact on stock prices (returns). As a result, even though earlier research has greatly advanced our knowledge of the connections between financial markets and actual economic activity, the literature's conclusions are inconsistent because of the variability of the variables examined, the countries chosen,

and the time frame of the study. Because every market is different with regard to its own laws, regulations, and kinds of investors, it is challenging to generalize the findings.

Lastly, it is clear that there is a dearth of research on developing stock markets, with the Nepalese market in particular receiving notably little attention. In fact, just two of the empirical research that this study assessed included the Nepalese market and looked at how macroeconomic factors affected its performance. Of the literature that has been evaluated, none has specifically looked at the short- and long-term dynamics of these variables on stock returns on Nepalese markets. Therefore, this study, to the best of our knowledge, will be among the first empirical studies to consider the relationships between the Kenyan stock market returns and a set of macroeconomic variables from 2016-2022.

CHAPTER - III

RESEARCH METHODOLOGY

A methodical approach to solving the research challenge is through research methodology. It might be viewed as a science that studies scientific research methodology. It examines the reasoning behind the research methodology and elucidates the rationale behind the use of a specific approach or method. It aids in determining the suitability, validity, and accuracy of research. It is impossible to gain the rationale for the current investigation without the assistance of appropriate research methods. The applied approach will be employed in order to accomplish the study's goals.

3.1 Research Design

Both a casual comparative design and a descriptive design were used in this investigation. Descriptive research design is the research that has been modified for this study's objectives. Coordination and regression analysis have been employed in conjunction with a descriptive and casual comparative study design to ascertain the impact of GDP, foreign exchange reserve, interest rate, inflation rate, and money supply on the NEPSE index. Descriptive research methodology has been utilized to determine the qualitative elements influencing the NEPSE Index, whereas casual comparative research design has been used to determine the cause-effect correlations between the independent and dependent variables. The information from 2007/08–2021/22 A.D. is covered (Pokharel, 2022).

3.2 Population & Sampling Method

The population is the study's focus group, and it is also the group on which Nepal Ratra Bank's data may be broadly used (NRB, 2023). The study uses purposive sampling, which involves selecting data across a 15-year period, from 2007–2008 to 2021/22.

3.3 Nature and Source of Data

The secondary data served as the study's basis. The Ministry of Finance (MOF), NEPSE, SEBON, and NRB served as the data sources. Data was gathered from NRB on the dependent variable (NEPSE Index) and the independent variables (foreign exchange rate, GDP, interest rate, inflation, and money supply). Similarly, further pertinent and essential

data can be acquired from the publication; additional publications utilized for this aim include books and pamphlets, periodicals, journals, newspapers, schools of thought, etc.

3.4 Method of Analysis

The pattern of data that is now available will guide the data analysis. A variety of financial, accounting, and statistical techniques have been employed to meet the study's purpose.

3.5 Research Framework and Definition

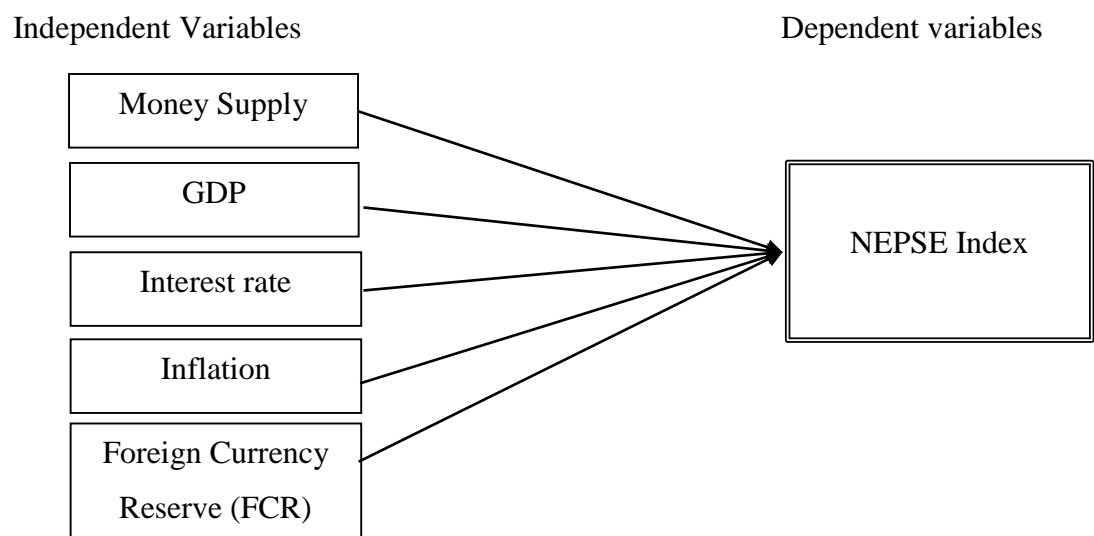


Figure 1 Research Framework

Source: (Mohammad, 2017)

NEPSE Index

The NEPSE index refers to the benchmark index of the Nepal Stock Exchange (NEPSE), also known as the market value-weighted index. It indicates the increase or decrease of total market capitalization of companies' transactions that are listed in Nepal Stock Exchange.

Foreign Currency Reserve (FCR)

Strictly speaking, foreign exchange reserves, often known as Forex reserves, are just foreign currency deposits held by citizens and monetary agencies. A country's foreign exchange reserves are its holdings of foreign assets in government securities, like bonds and gold that can be quickly converted into cash as well as its holdings of other currencies

that can be exchanged for its own currency through the foreign exchange market (Cooper & Schindler, 2014).

Gross Domestic Product (GDP)

To gauge a nation's economic health, the greatest indicator is its gross domestic product. The GDP represents the entire amount of output generated by all individuals and businesses inside a nation. The usual formula for calculating a country's gross domestic product is $C + I + G + (X - M)$. Whether they are foreign-owned businesses or citizens makes no difference. The government considers their output as GDP if they are inside the nation's borders (Davidson, 1996).

Interest rate (IR)

The proportion that banks charge their clients for goods or services is known as the interest rate. Since it is an additional revenue stream for banks, it positively correlates with bank profitability (Kunt & Maksimovic, 1996).

Inflation rate

The rate at which the price of any commodity fluctuates is known as the inflation rate. Because rising prices reduce bank profitability, there is an inverse link between inflation and profitability (Hussain, 2002).

Money Supply

The entire amount of cash and other liquid assets in an economy on the measurement date is called the money supply. All currency in circulation and bank deposits that an account holder can easily convert to cash are included in the money supply (Keray, 2009).

CHAPTER- IV

RESULTS AND DISCUSSIONS

The data gathered in relation to the study's variables is presented in this chapter. Each variable's data is shown in a different figure. Data have been evaluated using a variety of statistical techniques in order to determine the answers to the study topics. In order to characterize the elements influencing the growth and prospects of the capital market, descriptive statistics such as mean, median, maximum, minimum, standard deviation, skewness, and kurtosis have been computed.

4.1 Results

4.1.1 Descriptive Analysis

The descriptive statistics of all the variables utilized in the study are shown together in Table 2. It displays the descriptive statistics for each of the analysis's variables. In columns two through five, the mean, median, maximum, minimum, and standard deviation are shown in sequential order.

Table 2

Descriptive statistics

Variables	Mean	Std. Dev.	C.V (%)
GDP	4.588	2.762	60.20
Inflation Rate	7.285	2.604	35.74
Interest rate	5.031	1.534	30.49
Money Supply	11.281	1.581	14.01
Currency Reserve	10.898	1.340	12.30
NEPSE	6.897	.615	8.92

Source Appendix I

Table no. 2 which explain the descriptive statistics table that presents a summary of key characteristics for each variable in the dataset related to the performance of capital market. The table provides information on six variables: GDP, inflation rate, interest rate, money supply, currency reserve and NEPSE.

The "Mean" represents the average value of each variable. For instance, the mean NEPSE is 6.897, indicating the average NEPSE across the studied. Similarly, the mean values for GDP, inflation rate, interest rate, money supply and currency reserve are 4.588, 7.285, 5.031, 11.281 and 10.898 respectively.

The "Std. Dev." (Standard Deviation) measures the spread or dispersion of data points around the mean. It provides information about the variability of the data. For example, the standard deviation of NEPSE (Ln) is 0.615, suggesting that the NEPSE values vary relatively close to the mean value.

The coefficient of variation "CV" is the ratio of the standard deviation to the mean. The higher the coefficient of variation, the greater the level of dispersion around the mean. It is generally expressed as a percentage. For example, the coefficient of variation of NEPSE is 0.0892, suggesting that NEPSE values has more uniformity.

4.1.2 Correlation Analysis

Table 3 displays the correlation between the variables that were used in the study. It is reasonable to believe that at least one variable influences the other if there is correlation between the variables. The Karl-Pearson correlation coefficient between the variables used in the analysis is shown in this table. The P-value is shown between parenthesis. The following is the presentation of variables.

Table 3

Pearson's correlation

Variables	GDP	INF	INT	MS	FCR	NEPSE
GDP	1					
Sig. (2-tailed)						
Inflation rate (INF)	-.228	1				
Sig. (2-tailed)	.413					
Interest rate (INT)	-.018	-.128	1			
Sig. (2-tailed)	.949	.649				
Money Supply (MS)	-.164	-.763**	.094	1		
Sig. (2-tailed)	.559	.001	.738			
Foreign Currency Reserve (FCR)	-.033	-.455	-.102	.314	1	
Sig. (2-tailed)	.907	.088	.717	.255		
NEPSE	.049	-.727**	-.188	.699**	.314	1
Sig. (2-tailed)	.863	.002	.503	.004	.255	

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

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

Source Appendix II

The relationship between NEPSE and GDP is 0.019 showing less degree of positive correlation and the relationship isn't significant. Similarly, the relationship between inflation and NEPSE is -0.727 showing high degree of negative correlation and the

relationship is significant at 0.01 level of significance. Likewise, interest rate is showing high degree of negative correlation and insignificant with NEPSE at -0.188 coefficient.

Money supply and NEPSE showing high degree of positive correlation and significant relationship with 0.699 coefficient at 0.01 level of significance. Also, foreign currency reserve has insignificant relation showing high degree of positive correlation of 0.314.

4.1.3 Regression Analysis

The main purpose of regression analysis was to determine how the study's independent factors affected the dependent variable. Testing the hypotheses and examining the effects of GDP, Inflation Rate, Interest Rate, Money Supply, and Foreign Currency Reserve on NEPSE were the goals of the analysis.

Table 4

Model Summary of NEPSE

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	1	.871a	.758	.624

a. Predictors: (Constant), GDP, Inflation Rate, Interest Rate, Money Supply, Foreign Currency Reserve

Here, r^2 represent the percentage of the variability of NEPSE that can be explained by independent variables. The adjusted r^2 is more reliable statistics because it accounts the sample size as well. Adjusted R-squared is used to determine how reliable the correlation is and how much it is determined by the addition of independent variables. The value of R^2 (coefficient of determination) is 0.871 which represents 87.10% variation in NEPSE has been explained by GDP, Inflation Rate, Interest Rate, Money Supply, Foreign Currency Reserve.

Table 5

ANOVA Table

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.015	5	.803	5.651	.012b
	Residual	1.279	9	.142		
	Total	5.294	14			

a. Dependent Variable: NEPSE

b. Predictors: (Constant), GDP, Inflation Rate, Interest Rate, Money Supply, Foreign Currency Reserve

The ANOVA table shows the overall summary and significance of dependent variable and independent variable. In this table, it indicates that the impact of independent variable i.e. Inflation Rate, Interest Rate, Money Supply, Foreign Currency Reserve on dependent variable i.e. NEPSE is statistically significant at significance level 0.05 i.e. 0.012.

Table 6

Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Remarks
		B	Std. Error	Beta			
1	(Constant)	6.609	1.967		3.360	.008	Significant
	GDP	.024	.047	.109	.518	.617	Insignificant
	Inflation rate	-.068	.078	-.288	-.876	.404	Insignificant
	Interest rate	-.145	.068	-.362	-2.127	.062	Insignificant
	Money Supply	.355	.167	.913	2.132	.062	Insignificant
	FCR	-.239	.124	-.521	-1.929	.086	Insignificant

a. Dependent Variable: NEPSE

Source: Appendix III

Regression analysis output: coefficient

The linear equation of this model is,

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5$$

$$\text{NEPSE} = 6.609 + 0.024 \text{ GDP} - 0.068 \text{ Inflation Rate} - 0.145 \text{ Interest Rate} + 0.355 \text{ Money Supply} - 0.239 \text{ FCR}$$

In assessing the statistical significance of the regression coefficient, the t-value and corresponding P-value are taken into account. For example, for a, the t-value is 3.360 and the P-value is 0.008, or 0.08%. It demonstrates the statistical significance of computed "a." The foreign currency reserve, interest rate, and inflation rate all have a negative effect

on NEPSE; at the 5% significance level, the FCR and inflation rate are not significant. Similar to this, NEPSE is favorably impacted by GDP and money supply, with P-values of 0.617 and 0.062 indicating that while GDP is statistically insignificant, money supply is at the 5% level of significance, with coefficients of 0.024 and 0.355, respectively. Since every included variable has a p-value greater than 0.05, the effects of the GDP, inflation rate, interest rate, money supply, and foreign currency reserve are negligible when it comes to the NEPSE.

4.2 Discussions

Since analyzing the issues and future potential of the Nepalese stock market is one of the study's primary goals. All parties involved in the stock market will find great benefit from the study on the issues and future potential of stock growth in Nepal. The research aids in outlining the challenges and opportunities associated with stock growth for prospective market participants. Every study has certain limitations and restrictions. Similarly, a few standard limitations also apply to this investigation. The foundation of this research is a fundamental analysis of the expansion of the stock market.

Positive skewness values, which may be found in the NEPSE, money supply, inflation rate, interest rate, and currency reserve, show that the data are skewed to the right, meaning that the right tail is longer than the left. However, a negative GDP value indicates a leftward skew in the data, indicating a longer left tail than a right tail. This is in conflict with the research by Akter and Rahman (2023) but similar to the conclusions of Suhendra and Malini (2022).

The linear relationship between two variables is measured by the correlation coefficient, which also indicates its direction and strength. The findings show that NEPSE has weak positive correlations with the money supply, interest rate, and foreign exchange reserve, indicating a slight tendency for these variables to move in tandem with one another. These relationships do not, however, meet statistical significance. However, there is a notable tendency for the inflation rate to be linked to higher NEPSE, as evidenced by the fairly weak negative connection between NEPSE and inflation. There is a statistically significant correlation here. The results presented here are more in line with those of Paterson et al. (2023) and Devkota (2019).

Additionally, there appears to be a slight propensity for a higher GDP to be correlated with a foreign currency reserve based on the small negative connection between GDP and FCR. It should be noted that this correlation lacks statistical significance. This is comparable to Selvarajan and Rahim's (2020) findings, but not to Edo's (2021) findings. The results of Ukamaka (2021) and Nguyen (2023) however, support the notion that this association is not statistically significant.

On the dependent variable, or NEPSE, the influence of the interest rate, money supply, foreign currency reserve, and inflation rate is statistically significant. Both the interest rate and the inflation rate have a negative impact on NEPSE, but even at the 10% significance level, none is significant. Similarly, GDP and money supply have a positive effect on NEPSE, where GDP is statistically significant but money supply is not. Therefore, NEPSE has a linear relationship with GDP, inflation rate, interest rate, money supply, and foreign currency reserve. This finding is consistent with Pandey, Risal, and Chauhan's (2020) findings, however Ukamaka (2021) and Panthi (2022) did not support it.

CHAPTER - V

SUMMARY AND CONCLUSION

5.1 Summary

The study examines how the NEPSE index is affected by macroeconomic data. Research using both descriptive and causal comparison methods has been conducted in order to meet the specific goal of the study. A number of publications on the subject, including books, journals, and essays as well as some earlier studies and theoretical reviews, have been reviewed. The pattern and status of dependent and independent variables are analyzed using a descriptive and informal research design. The influence of the foreign currency reserve, GDP, money supply, interest rate, and inflation rate on the NEPSE index is measured using a causal study methodology, regression analysis, correlation, and other financial variables. Secondary data were employed in this investigation. The information is derived from associated office annual reports covering a ten-year period, from 2007/08 to 2021/22.

During the study period, secondary data were examined using a variety of statistical and financial tools, in addition to weighted average and percentage analysis. The first chapter covers the main research question, the overall context, a succinct description of the sample banks, the problem statement, the objectives and rationale for the investigation, and the constraints of the study. The theoretical analysis is the main topic of the second chapter, which also offers a synopsis of pertinent and related literature. An description of the conceptual framework is provided, as well as a summary of the significant research in general. The third chapter provides a description of the study's research methodology. The definition of statistical tools, research design, data source, analysis technique, and the analysis of financial indicators and variables are only a few of the subjects covered in this chapter. The fourth chapter presents and analyzes data using statistical tools and methodologies to illustrate quantitative aspects of dividend policy. This chapter also contains the conversations. The fifth chapter presents the summary, conclusion, and implications. It also makes some recommendations and, to the degree that it is practical, contrasts them with more empirical data.

5.2 Conclusion

The study's findings show that the money supply, foreign exchange reserve, GDP, inflation rate, and interest rate are all related and have a significant impact on NEPSE. NEPSE has weak positive correlations with interest rate, money supply, and foreign currency reserve, according to descriptive and inferential statistics, indicating a slight tendency for these variables to move together in the same direction. These relationships do not, however, meet statistical significance. However, there is a statistically significant but rather modest negative link between the two. The results presented here are more in line with those of Patterson et al. (2023) and Devkota (2019).

NEPSE shows weakly positive, statistically non-significant connections with the money supply, interest rate, and foreign currency reserve, according to both descriptive and inferential statistics. This is comparable to Selvarajan and Rahim's (2020) findings, but not to Edo's (2021) findings. Nonetheless, there is a statistically significant albeit somewhat modest negative association between NEPSE and inflation. The results of (Ukamaka, 2021) and (Nguyen, 2023) corroborate it.

Furthermore, the inflation rate and interest rate have a negative impact on NEPSE, but even at the 10% significance threshold, neither of these factors is significant. In a similar vein, GDP and money supply both have a positive effect on NEPSE, with GDP being statistically significant but money supply not negligible. Therefore, NEPSE has a linear relationship with GDP, inflation rate, interest rate, money supply, and foreign currency reserve. This finding is consistent with Pandey, Risal, and Chauhan's (2020) findings, however Ukamaka (2021) and Panthi (2022) did not support it.

5.3 Implications

Following an analysis of the securities market, the following recommendations have been made to improve the securities market:

- Neptune should timely examine and update the data provided by the listed companies on a regular basis. Any business that is discovered to be operating outside of NEPSE regulations should be dealt with very away. High-speed settlement and clearance, an investor-friendly atmosphere, a well-furnished office, automated systems, and effective staff are all necessary for the NEPSE. NEPSE ought to concentrate on the potential for an electronic trading system to replace the current trading process.

- The risk of investing in the stock market has increased due to the lack of access to trustworthy guidance and recommendations regarding stocks and market possibilities. Public investors' trust must be bolstered by improving the stock market's efficiency and competitiveness and by welcoming new brokers into the market.
- In order for the Security Board of Nepal to function as an effective regulatory body for the stock market, emphasis should be placed on strengthening the board's institutional capacity through improvements to its physical facilities, autonomy in financial matters, legal aspects, and the availability of a sufficient number of qualified human resources. Additionally, improvements should be made to its internal governance system.
- The investment strategy is unknown to Nepalese investors. As a result, the investment plan should be explained to them based on a correct evaluation of risk and return. Investors should always be conscious of their strengths, weaknesses, and capacity for taking risks in order to gain a competitive advantage through excellent stock analysis and forecasting. Investors from Nepal are not well-versed in stock markets. As a result, they ought to be required to read NESPE and SEBON annual reports as well as daily newspapers and periodicals.

For dependable and sustainable capital mobilization, ongoing research and analysis of the securities market, investor education, raising awareness, and establishing an academy for institutional financial education services are all necessary.

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APPENDICES

Appendix I

Essential Information from World Bank and Nepal Rastra Bank

Fiscal year	Inflation rate	Interest rate	NEPSE	Money Supply	FCR
2021/22	3.8	7.34	7.6	13.75	11.18
2020/21	4.09	4.72	7.97	13.86	13.26
2019/20	5.05	4.97	7.24	13.75	13.1
2018/19	5.57	3.74	7.14	13.66	12.96
2017/18	4.06	5.28	7.1	11.04	10.47
2016/17	3.63	4.12	7.37	10.89	10.4
2015/16	8.79	3.9	7.45	10.76	8.23
2014/15	7.87	5.9	6.87	10.59	10.17
2013/14	8.36	6.3	6.94	10.45	10.01
2012/13	9.04	4.1	6.25	10.31	9.88

Source: www.nrb.com.np and www.worldbank.com

Appendix - II

Variables	Minimum	Maximum	Mean	Std. Dev.	Skew ness	Kurtosis
GDP	-2.3744	8.9831	4.469021	3.38274	-.89011	.65742
Inflation Rate	3.6392	9.0468	6.026020	2.23710	.33341	-1.990
Interest rate	3.7477	7.3472	5.037011	1.17859	.81567	-.12995
Money Supply	30159.0258	1049410.2014	404717.4932	467206.125	.51886	-2.15828
Currency Reserve	3742.6092	571971.8047	169703.8538	227983.193	1.10554	-.79996
NEPSE	518.3367	2883.3871	1456.8452	651.6869	1.02318	1.84012

Source: SPSS Output

Appendix - III

Variables	GDP	INF	INT	MS	FCR	NEPSE
GDP	1					
Sig. (2-tailed)						
Inflation rate (INF)	-.363	1				
Sig. (2-tailed)	.303					
Interest rate (INT)	.109	-.150	1			
Sig. (2-tailed)	.764	.679				
Money Supply (MS)	-.202	-.624	.104	1		
Sig. (2-tailed)	.575	.054	.775			
Foreign Currency Reserve (FCR)	-.072	-.604	-.019	.863**	1	
Sig. (2-tailed)	.844	.064	.959	.001		
NEPSE	-.002	-.641*	.115	.622	.381	1
Sig. (2-tailed)	.996	.046	.752	.055	.278	

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

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

Source: SPSS Output

Appendix IV

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.422a	.178	.167	.46807

a. Predictors: (Constant), FCR, GDP, INT, INF, MS

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.993	4	3.498	15.967	.000b
	Residual	64.632	295	.219		
	Total	78.625	299			

a. Dependent Variable: NEPSE

b. Predictors: (Constant), FCR, GDP, INT, INF, MS

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.101	.122		9.056	.000
	GDP	.349	.068	.401	5.117	.000
	Inflation rate	-.022	.063	-.031	-.353	.724
	Interest rate	-.039	.064	-.052	-.600	.549
	Money Supply	.082	.073	.097	1.122	.263
	FCR	1.101	.122		9.056	.000

a. Dependent Variable: NEPSE

Source: SPSS Output